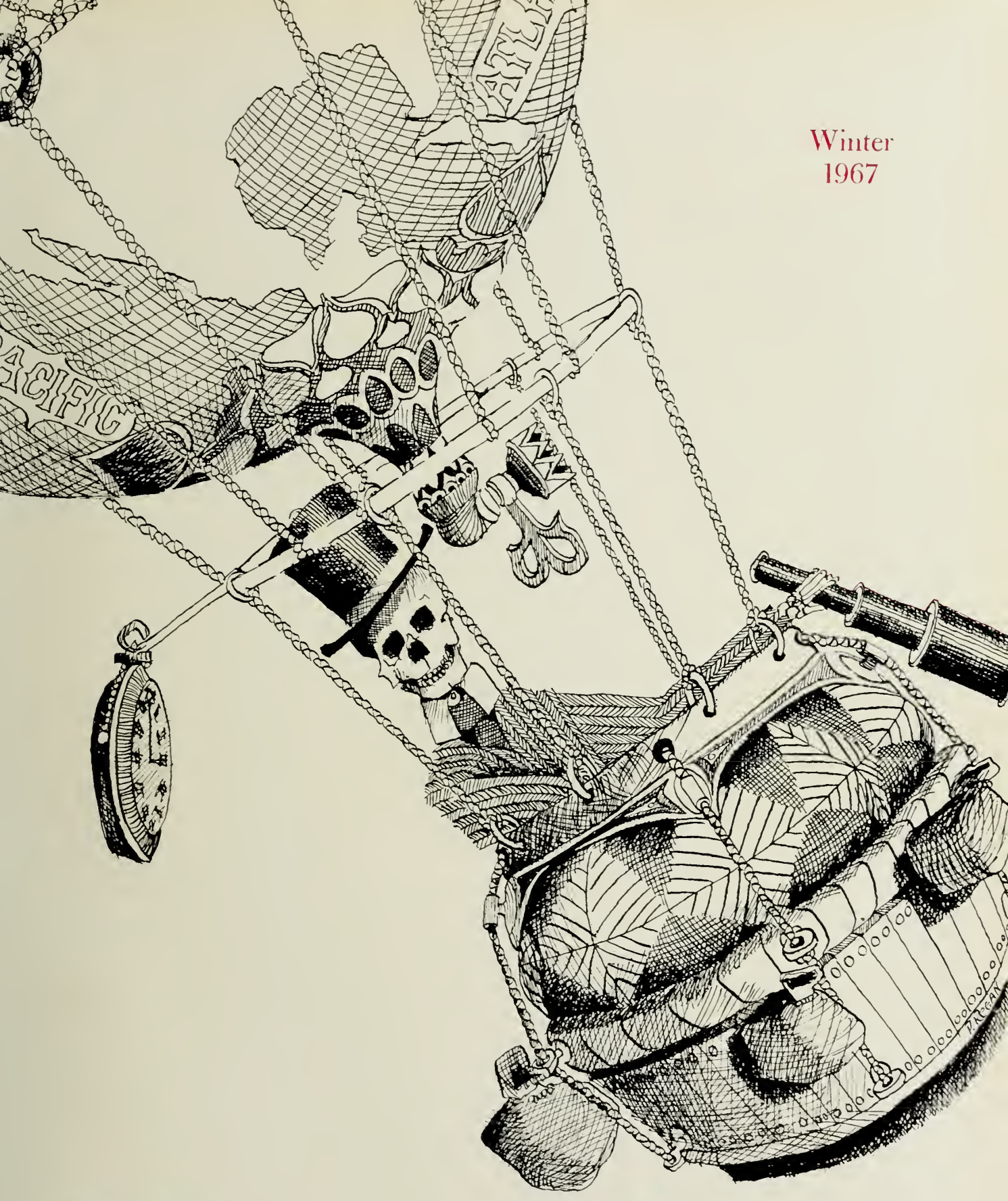

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COVER: "For each one of us, there are two kinds of death. The death of human beings, or abstract death, which is an interesting natural phenomenon. And our death, or the death of those who are like a part of ourselves. . . . In order to apprehend, beyond the realm of symbols, the true meaning of death, one must study life, and not death."

ALEXIS CARREL

CREDITS: Photographs: Student Health Project, California, 5, 6; "Memento Mori," *Ciba Journal, No. 39, 1966*, 12: Skull and hand, from painting by Frans Hals, *The Age of Rembrandt*, 12; Eric R. Sanderson, 18, 19; *Paris-Match*, 23, 25; Fredric Jarrett, 27; Joseph R. Silvio, 31; Fabian Bachrach (Dr. Taylor), 42. Illustrations: Paul A. Regan, Cover; Raymond Crane, 8–11.

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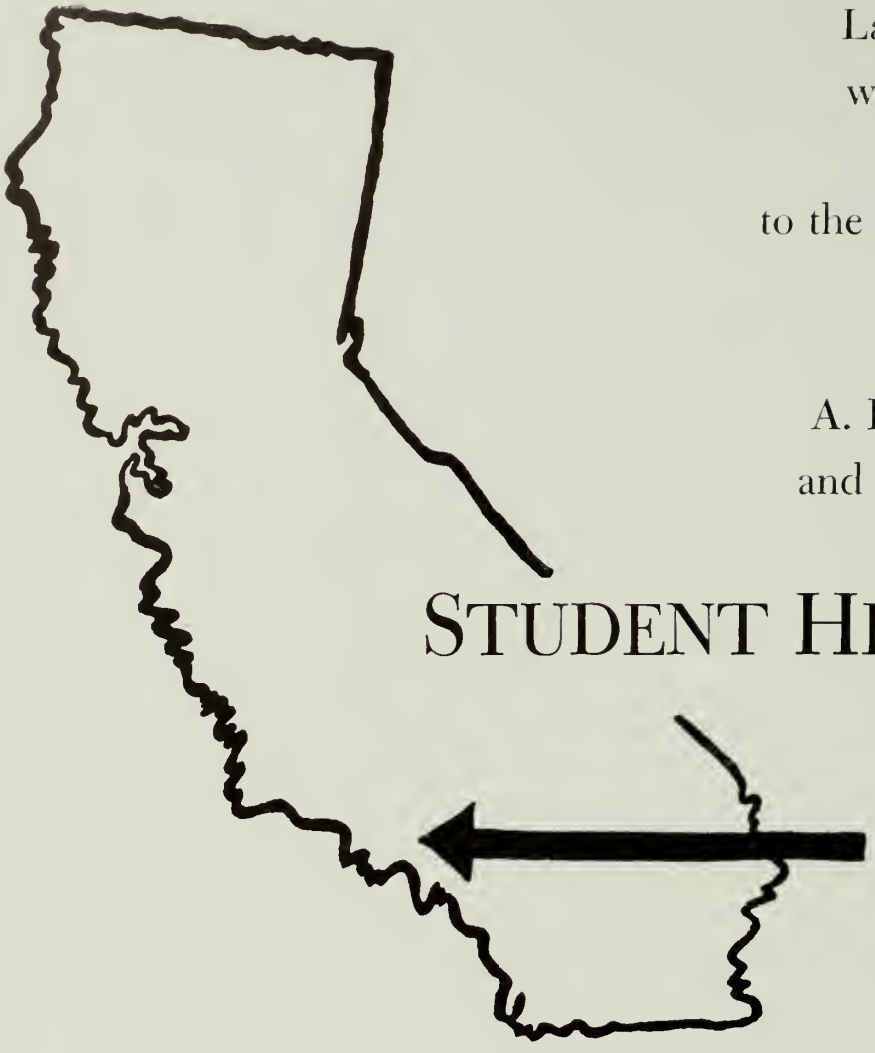

Last summer, three HMS students were offered a unique opportunity to gain exposure to the health problems of a community early in their medical careers.

BETSY THOMAS '69, A. DAVID BRANDLING-BENNETT '69, and author EINAR W. ANDERSON '68 participated in the

STUDENT HEALTH PROJECT

of the

UNIVERSITY OF SOUTHERN CALIFORNIA

THE FULL TITLE of the project was the "Student Project in Community Health Resources for the Poor." It was planned by its sponsoring organization, the Student Medical Conference of Los Angeles, and had the following objectives:

1. To educate health science students in the comprehensive health and medical care problems of the underprivileged.
2. To provide the health science student with direct experience in the operation of community health resources so that he may assess for himself the effectiveness of these agencies in meeting the needs of the medically disadvantaged.
3. To explore the potential of these experiences in terms of introducing more community health concepts into professional school curricula.
4. To contribute to the health education and medical care of the poor.

Michael McGarvey, a fourth year student at the University of Southern California Medical School and co-chairman of the Student Health Project, expressed some of the thinking behind the planning of the SHP:

It is widely recognized that lay and professional community facilities for the medical care of the indigent are inadequate with respect to distribution and quality and that a significant sector of the public lacks the money to pay for medical care. (Recently passed California legislation, Assembly Bill 5, 1965) and Medicare provide for amelioration of some of these deficiencies. However, no amount of money or goodwill can be expected to improve current conditions if the reasons for the more basic deficiencies are not understood and corrected. The combined efforts of many social, economic, and political groups have failed to correct existing inequities in medical care . . . . Before one can bring imagination, zeal, and ideals to bear upon the solution of the medical problems of the indigent, it is essential to understand how these problems came about, what factors tend to perpetuate them, and at what points in the existing social structure one can come effectively to grips with them. As things now stand, few, if any, educational institutions provide the opportunity to study the problems of the medically underprivileged. Health science students have, by tradition, been cast in the role of passive recipients of technical and professional information. Their concern for human beings involutes and withers under the pressures of the technical curriculum. . . . The Student Health Project is a pioneer effort to provide health science students with an opportunity to mature into responsible human beings as well as competent professionals; (it) should not be regarded just as an expression of student dissatisfaction with the current shape of things; its aim is rather to foster the development of a mature view of the problems which health scientists seek to solve, but to which they often succumb.

The project began in January, 1965, when a group of health science students in Southern California founded the Student Medical Conference of Los Angeles. The purpose of this organization was to "take an active and productive role in informing ourselves on health issues" which generally were not included in their formal curricula, but with which they would be expected to deal as health professionals. The group resolved to "engage in active community service, to examine critically issues that pertain to the public health, and to publish facts, information, and statistics concerning problems of health which have failed to engender appropriate concern and action."

The Student Health Project grew directly out of this interest in sociomedical problems. In the Summer of 1965, ten nursing students, two medical students, and one dental student spent two months working as volunteers in various capacities with seasonal workers in the San Joaquin Valley. It was impossible to raise money to pay these students for their efforts, but the experience they gained, though often frustrating and disillusioning, was considerable.

It was this experience that formed the basis for the Student Medical Conference's plans the following year. But, in the Fall of 1965, the Office of Economic Opportunity of the federal government contacted the SMC and encouraged them to submit a grant proposal for a student program similar to that of Summer, 1965, but on a larger scale. At that time, the SMC of Los Angeles was the only multidisciplinary organization in the health sciences known to the OEO which was interested in both the technical and socioeconomic aspects of health care. USC Medical School agreed to act as a sponsoring agency. A distinguished advisory committee was assembled and a newly-formed sister organization, the Student Health Organization of Northern California, joined the project. Six weeks later, the OEO awarded USC a $204,000 demonstration grant to finance an essentially student-planned project.

The grant provided fellowships for 90 medical, dental, nursing, and social work students from 40 institutions in 11 states. In addition, 15 community workers—indigent residents of many of the areas where students were scheduled to work—received the same stipend as the students, worked closely with them, and assisted the project workers in forming community contacts and gaining general experience about the actual locale of their daily activities.

Students worked in poverty areas in nine counties, divided approximately evenly between Southern California, the San Francisco Bay area, and the San Joaquin Valley. They were placed in pre-existing situations under the preceptorship of experienced professionals in county health departments, county hospitals, community action programs, and private practitioners located in the poverty areas. Initial orientation conferences and final evaluation sessions were held, in which students, preceptors, and other interested health professionals participated. Weekly conferences in Los Angeles, Palo Alto, and the Valley, described by one student as "autodidactic group therapy," completed the project's full schedule.

Betsy Thomas was placed in a project administered by the Adolescent Clinic of Los Angeles Children's Hospital, under the preceptorship of Dr. Dale Garrell. She lived and worked for 10 weeks in the William Mead Homes, a city housing project just north of the downtown area.

The residents of the housing project are about 50% Mexican-American and 50% Negro: two-thirds of the households are headed by women; a large percentage of the families receive California state aid: and the average family income is about $2500.

The Mead Homes is a well-defined residential island in a predominately industrial and commercial area. Over the years, it has frequently been "selected" as a convenient location for numerous public health services, such as well-baby clinics, immunization programs and various health education programs. However, a health problem existed in the community. The available services were underutilized; four-hour clinics were closed after 45 minutes, because they were not patronized; mothers did not understand why they were not supposed to bring their sick babies to a "well-baby" clinic, but were supposed to take the bus to the county hospital pediatric clinic. There was a serious lack of health awareness in the community which even the expenditure of large sums of city and county money had failed to alter to any great extent.

Betsy worked with two other students to develop a team of "community health aides"—a group of four adolescents from the housing project, paid from OEO Job Corps funds at the standard wage of $1.25 per hour. These aides were liaison personnel between the residents of the project and the many health services potentially available to them. Betsy and her co-workers found that theoretically the Mead Homes were quite well-provided with health services from the public sector, although there was only a small industrial clinic of private practitioners in the area.

SHP worker chats with boy. Shack in background houses family of 12.

The SHP workers and their teen-age health aides came directly into contact with one of the paradoxical health problems of the poor: how can we educate our underprivileged citizens to become better aware of their own health problems, to put medical care higher on their list of day-to-day priorities, and to make better use of health facilities when they are offered?

Even the aides, who knew their neighbors quite well, found it difficult to combat the widespread apathy toward health in their community and they showed the effects of a summer's frustration even more than the achievement-oriented medical students. Whether these four teenagers will form a permanent, useful part of the Mead Homes community is not certain at this time. They are continuing their work during the school year on a volunteer basis. Last fall, they helped organize a baby-sitting service and a car pool for trips to the county hospital.

Dave Bennett worked in the Outpatient Department of the vast Los Angeles County General Hospital. The Hospital serves as the primary source of health care for many indigent residents of Southern California and also as a teaching facility for USC and the newly reorganized California College of Medicine. Under the preceptorship of Drs. Weston and Lipton, Dave and his partner, Steve Sharfstein (Einstein '68), worked as liaison between the pediatric—psychiatric OPD and the persons or families in the community who had come to the hospital for help, or who had been referred to the hospital by other agencies.

Emergency cases find little difficulty in gaining admission to the hospital or receiving crisis therapy in the OPD, but a waiting period of six to eight weeks exists for non-emergency interviews and group therapy. During this period, many changes can occur in the family situation and often the crisis is past, or the problems entrenched, by the time the case comes up for treatment. As a result, the interview is much less effective.

Thus Dave and Steve contacted families by telephone within a day or two after they applied for help. They arranged an hour-long screening interview in the home, and attempted an initial summary and evaluation of the problem with the guidance of their preceptors. Often the problems could best be handled by other agencies, especially if the family lived far away, or if the particular problem was poorly suited to the type of therapy offered by the hospital. Dave and Steve then consulted county-wide indices of welfare agencies, arranged referral appointments, and generally saw that the family received service in the fastest and most efficient way.

Through this work, the students gained some beginning experience in interviewing techniques and learned how to elicit problems from indigent people quickly and sympathetically. They gained an appreciation of some of the practical problems of the poor in obtaining health care, and learned a considerable amount about the existing structure of welfare and health services in various communities in Southern California. In addition, they helped make the services of the hospital more effective by this preliminary screening. Patients were more aware of the nature of the services offered by the hospital, they kept their appointments more regularly, and almost universally, they expressed their gratitude that one of the hospital's departments offered services of a somewhat personal nature, rather than the usual, anonymous, business-like approach of most public hospitals. The hospital and the USC are currently considering the adoption of some type of liaison and screening service as an integral part of their OPD program.

I worked for eight weeks in the Los Angeles County Department of Mental Health, under the preceptorship of Donald F. Muhich '56. The department, which is a separate organization from the county health department, administers a rapidly-expanding program of community mental health in Los Angeles County, using State and local funds.

I was assigned to the East Los Angeles and San Gabriel Valley Regional Mental Health Centers. These and other regional services of the department render indirect mental health service through decentralized, local programs of consultation and education. They also offer crisis-oriented direct care. Essential to the success of such an agency is an intimate knowledge of the community structure and an awareness of the so-called "caretaker" population. By observing and participating in the work of these two Centers, I was able to learn in some detail about the structure of two highly contrasting communities with particular respect to their medical and mental health services.

The East Los Angeles center serves a primarily Mexican-American population of some 600,000 with an average level of income ($4000 family) and education (mean of eight years) well below the county-wide averages ($6200 and 12.5 years). There is a high percentage (30%) of non-English-speaking people, and a large but not easily documentable population (est. ca. 100,000) of illegally resident aliens. The area does have a physician-population ratio of 1:1100, however, which is fairly close to the county average of ca. 1:800. Effective, indirect mental health care in such a community depends largely on personal contacts in the community, such as informal neighborhood leaders, family physicians and word-of-mouth and family-oriented channels. Somewhat less important are formal channels, such as community service agencies and meetings.

The San Gabriel Valley is a more typically spread-out suburban area. Its population of one million is predominantly middle-income Caucasian, but two small, well-defined areas of Negro residents exist in Pasadena and Monrovia-Duarte. There is also a sizeable Mexican-American population dispersed more evenly in lower-income areas throughout the Valley. These minority groups have the same problems as their counterparts in the City of Los Angeles, at least when their levels of income, education, and other indices are evaluated statistically. In contrast to East Los Angeles, however, these areas of indigent population are highly organized and provide almost a plethora of public, semi-public and charitable services. Thus, the problem of rendering effective, indirect mental health care in the San Gabriel Valley seems to be one of making formal contacts for consultation and education, helping the specific agencies involved reach the population most in need of service, providing transportation for indigent persons, and long-range planning for new services, especially in those areas in the eastern portion of the Valley which have grown up most recently.

We returned to HMS with an unexpectedly wide range of experiences in community medicine, a good deal of specific knowledge about the health problems of a large, complex, urban community, and above all, a heightened interest in all facets of modern medical care. Last summer's work continues to have relevance for us. Betsy, Dave and I are members of the Boston Student Medical Conference, which was organized in the 1965–66 academic year. The group is currently active, planning similar activities for students of the health sciences in the Boston area, both during the school year and this summer. In addition to serving as a coordinating and planning body for student activities in socio-medical areas, the Boston SMC hopes to work with school officials in discussing possible activities in community medicine as part of the regular medical curriculum.

Our most important reason for describing the activities of the Student Health Project in the *Bulletin* is to suggest that this type of "fellowship" in community medicine has a definite place in the medical school curriculum. Such an experience would be particularly appropriate at HMS because:

1. It enables students to gain an appreciation of patients in the very important context of the community in which they live, rather than solely in the context of the CPC or exercise in pathophysiology. Last summer taught us that it is often the patient's community situation, and not his deranged physiology, that exerts the greater influence on his physical and mental health status. It is the community that strongly influences how, where, and when the patient will present for medical care, and what measures should be taken to arrange for his treatment.

2. The specific information about the community and its facilities, and the skills we learned last summer are valuable aids for future physicians. Patients are often more concerned with how and where they will obtain their health care, than with what is actually the matter with them. This type of community experience enables the student or physician to deal more effectively with the patient's questions and concerns in these areas. Ironically, these are the concerns that often profoundly affect his clinical course and progress.

3. Direct contact with patients and their community can stimulate student interest, especially during the first two years of medical school, when patient contact is minimal, and the abundance of classroom work overwhelming. This unrest and dissatisfaction was expressed quite clearly in the Fall of 1965 when members of the Class of 1968 met with Dr. Joseph W. Cardella, associate dean for student affairs, to try to arrange more patient contact for first and second year students.

4. The Student Health Project helped clarify our thinking on public health problems and community medicine. The project demonstrated that these problems, and the health problems of the poor, are a day-to-day, ubiquitous, nation-wide phenomenon. They are not far removed in time or in place from our medical schools, practices, or homes. They are sufficiently complex so that "simple" solutions—the expenditure of x billion dollars of federal money—very likely will not solve the problem. It is the responsibility of the medical profession to determine the precise nature of the problems in each community and then to formulate rational and workable solutions to them.

5. The present curriculum and atmosphere at HMS clearly exert subtle pressure on the student to pursue a career in academic medicine or basic research. Exposure to community medicine during medical school would be a valuable aid to students in making their ultimate career choices.

The coming years will likely see widespread and important changes occurring in the administration and organization of health services. In this area, HMS could be of service to the medical profession by offering its students greater exposure to the problems of medicine as they exist in the community.

FOOTING in the BOIS de BOULOGNE

by Reginald D. Kernan '44

PARIS—With the approach of the winter solstice, the allées of the Bois de Boulogne become leafless and dank. At dawn, a watery sun tries, and usually fails, to penetrate the permanent cloud-cover. Lovers have long since taken to working out in the corner café, but not the footers.

Footing is really simple aggressive masochism. Aggressive because the footer is fiercely proud of not knowing why he gets up early, puts on his sneakers and goes out to the woods.

A recent International Congress of Psychosomatic Medicine here, faced with the problem of how to deal with neurotic fatigue in city-dwellers, recommended, among other palliatives, more green spaces and physical exercise. Footers are reluctant half-believers in this prescription for the very reason that they are already taking the medicine.

A footer is by no means a runner. Runners are young, work out in groups and sometimes become members of a team. They tend to lope boisterously past footers, after a jaunt of several miles, breathing easily and talking to each other.

A footer, of either sex, is, to put it bluntly, long in the tooth. If, while footing, he breathed easily or talked—much less tried to do both—he would have to be hospitalized. If not, he would be immediately denounced by his colleagues as a runner.

Footers do run, however. The typieal eompetitor parks his ear in one of the side roads of the *Bois* near the Lae Inférieur—a peanut-shaped pond. Being first on the seene is a minor but sweet vietory for the hardened footer. However, while he savors the triumph, a eolleague is sure to arrive, and this calls for a greeting. It is a diffieult moment, but at least the feeling is mutual. A particularly effusive eonversation might go like this:

"It's cold."

"Ha! It's not hot."

On oeeasion, a noviee has been misled, by the warmth of this exehange, into thinking that he has been invited to run in tandem. Against sueh opportunism, the old-line footer has a ready defense. He stops after 50 paees, elutehes his chest and produees a box of pills plainly marked: "Nitroglyeerine."

"*Zut*," he says, sinking onto a beneh, "that *sacrée angine*."

Spurred on by visions of ambulanees, polieemen and eourt testimony, the soeiable intruder sprints into the gloom.

Normally, then, our man ehooses one of several woodland paths, tosses away his eigarette, and jogs smartly off until exhaustion sets in. On the subjeet of this physiologieal barrier, practitioners of footing are somewhat retieent—even with themselves.

As has been suggested, one of the earefully guarded goals of the sport is that of putting oneself to the test but without aetually doing so. It is thus axiomatie in the fraternity that statisties having to do with ultimate performanee should never be revealed.

One emphysematous braggart elaimed—to outsiders—to have gone a full thousand yards without stopping. Bearable laetie aeid levels among footers over sueh a distanee are unknown, and when the brothers got wind of this outright lie they were ineensed. The eulprit got his well-deserved eomeuppanee several mornings later when he was eaught, eompletely winded, behind a tree—and worse, lean-

ing against it—not two hundred yards from his car.

Once deep in the bosky green, and pounding along within the supposed limits of his cardiac reserve, the footer can afford to take pleasure in the fresh air and the sound of waking birds. He may even allow himself the luxury of imagining that he has Jazy neatly boxed in at the top of the stretch and is bearing down to nip Ryun at the tape as the fans go wild.

But complete inattention is dangerous. There are four square miles of *Bois* and, even at this early hour, they are filled with natural hazards.

The least menacing of these include armed foresters, horsemen, and—in season—lovers. Foresters are officially charged with shooting down broken tree branches after a storm. Taken by itself, a nearby shotgun blast is no more than an unexpected nuisance.

But it has been reported that such a shot, one spring morning in the Route de St. Denis (1) caused a passing mare to shy and (2) flushed two lovers (3) into the path of an oncoming footer. This incident has been referred to since as a rare "triple."

At least the footing victim of this affair had the presence of mind to originate the code of conduct which is now observed in all unexpected encounters between lovers and footers:

"*Mille pardons!*" he cried, and kept going.

It might as well be said now that this technique is useless with walked dogs.

Dog-walkers constitute the sporting majority of the *Bois*. Quite reasonably

so, because only here can Toto be legally unleashed. He is usually a friendly animal and will sniff around and mind his own business until he sees a lone footer. Then, convinced that this moving object is something provided by the management as a plaything, he gives chase.

The only thing for the footer to do is to stop in his tracks and look over a nearby tree for grubs until Toto's mistress has got control of him. To keep running is to risk an occupational nightmare come true in which Toto is chewing up a piece of flannel trouser while being lectured by his owner.

"*Dis donc, vilain!* How many times have I told you not to chase *messieurs?*"

Toto doesn't pay any attention to this reproach, which is only fair because, after all, it is not really addressed to him but to the dyspneic athelete looking at the hole in his pantleg. The lady is saying, in translation:

"You, *monsieur.* If you weren't running around foolishly, you wouldn't get the poor dog excited."

Things can be—and have been—worse than this. Old-timers still shake their heads over the diabetic ex-nightclub proprietor—a regular, and in midseason form—who was pursued by a persistent boxer. In desperation, he dove into the owner's nearby Bentley only to be greeted in the back seat by his tormentor's twin brother.

Many footers prefer to exercise along the lakeshore. Here, relations with the fishermen and duck-feeders are optional and, on the whole, peaceable. To the angler, who wants only to sit motionless as long as possible studying ripples, the footer, laboring along the path to no purpose, is a sympathetic mystery. Duck-feeders, a more garrulous lot, seem to have an innate appreciation of footing, perhaps because they are dealing with ducks. The reasons they give for duck-feeding are more than comprehensible:

"I sleep here all night."

"My husband makes me drive him to work."

"By using wet bread, I get them to come out here on the bank where I can grab them."

This straight answer was given by an asthmatic young man whose car was parked close by with the engine running. It touches on the delicate subject of the relation between footing and poaching. There are rumors that this has been well documented; it will suffice to say here only that it has been proved possible for a footer with quick reflexes to run down and make off with either a duck or a hen pheasant without breaking stride.

Almost the last word on the subject of footing has been said by a severe-looking lady addict of a certain age—turned out in a hairy orange pullover and ankle sneakers. The proposition was put to her that it was, perhaps, all very simple. Masochism and neurotic fatigue could be left out, and your true footer made his sacrifices for no other reason than to enjoy cool fresh air, waking birds, misty sun and a little light exercise.

"Supportable," she said, moving off briskly, "but not sensational."

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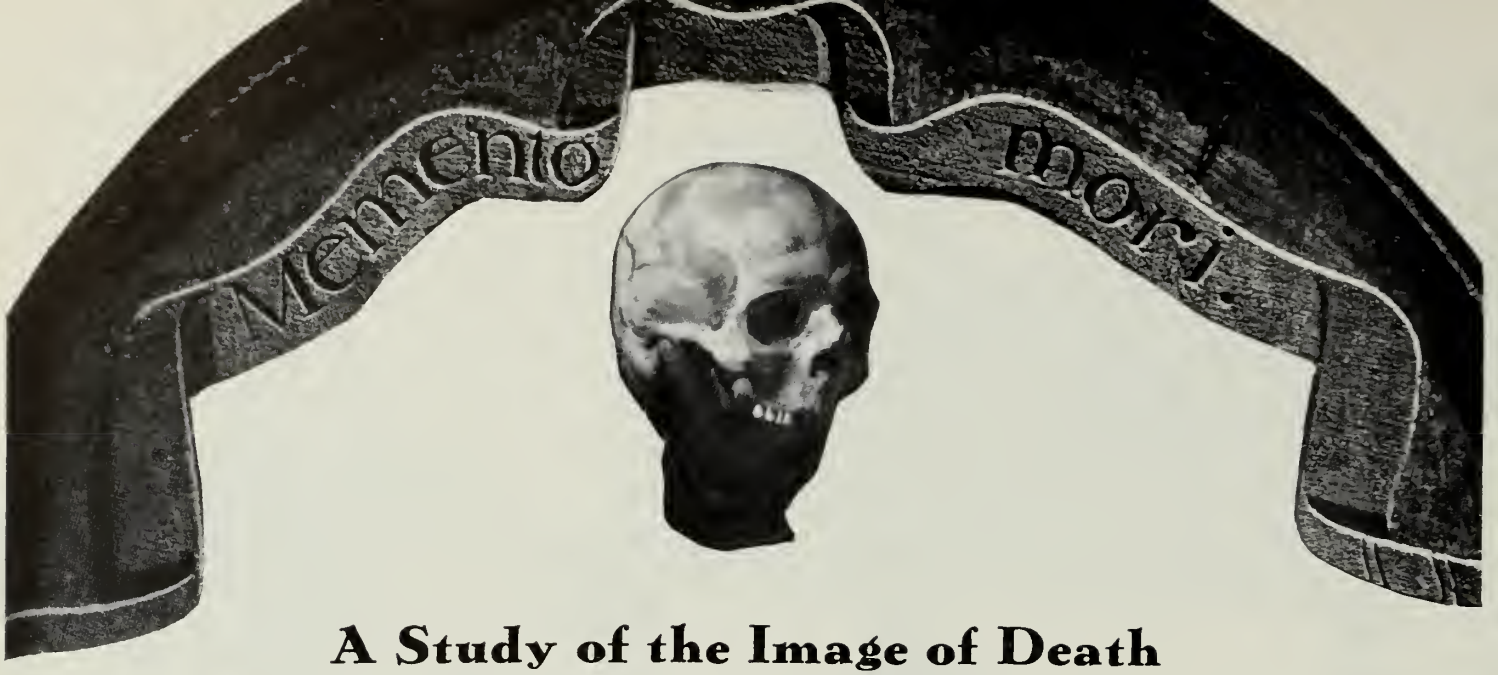

A Study of the Image of Death

by Thomas G. Gutheil '67

In the art of the Middle Ages, especially in the portraits of saints, one frequently sees a human skull in the picture. In the tradition of the time, this grisly symbol was designated the "memento mori"; the reminder of death. The purpose of this device was twofold: first, to keep in the forepart of consciousness the knowledge of the ephemeral quality of existence, its certain termination; second, to throw into bold relief the gaudy vanity of the paper world of this life, in contrast to the everlasting endurance of the next.

Throughout history it has been the physician who has needed no *memento mori*, since the fact itself is continually and cogently before his eyes. Alexis Carrel, the great surgeon and physiologist, wrote:

> For each one of us, there are two kinds of death. The death of human beings, or abstract death, which is an interesting natural phenomenon. And our death, or the death of those who are like a part of ourselves. The hygienist, the actuarian, the biologist, deal with abstract death. The physician, the priest, and also each one of us, with concrete death.[1]

Like the priest, the physician is often present for the crossing of the hairline boundary, for the imperceptible metamorphosis that transmutes the flesh into clay, the quick into the dead. Early in his career the physician must learn to steel himself and to curb his instinctual reactions regarding the event to permit his effective functioning in his profession. Many mechanisms are invoked in this cause, of value both to the physician and to the moribund patient and his family. These mechanisms and their use are amply discussed in the literature of the doctor-patient relationship and the reaction of both parties to death; this study will not concern itself with these issues. Rather it will deal with the *image* that death has presented to man in western culture through the ages—to man who confronts it as his final act.

A study of this nature requires little justification, involving as it does matters of ultimate significance. Yet such a study should properly defend itself against the twin accusations of irrelevance and morbidity. The following observations may serve this purpose.

Physicians are of the genus "scientist," a category including those who analyze and classify their environment as a means of mastering it. Since death is a part of the environment that the physician can master only transiently, it is fitting for the physician to study his adversary to gain understanding in place of impossible victory.

In the medical student, death anxiety has been studied by Livingston and Zimet[2], who find it high in future psychiatrists and low in prospective surgeons. The student, then, may appropriately discharge his anxiety in such a study as this, secure in the knowledge that his fears, though they have not been allayed, have at least been quantitated.

To the charge of morbidity, Carrel's words can be countered:

> Death is neither a calamity nor a blessing. It is a necessity, an indispensable condition of life.[1]

Finally, the image of death in its multitudinous forms has inspired pen, brush and chisel through the ages. The latter aspect alone would be too large an undertaking for such a study. Though we cannot possibly cover the subject of the image of death, we can make some scratches on the surface, trusting humbly that they might prove of interest.

The word "death" stems from the Gothic "dauthus," in turn derived from a verb-form meaning "to die"; this became the Anglo-Saxon "dēath" and thence to English "death." The verbal origin of the word reflects a cognizance of a dynamic process. As we shall see, personification of this process is a late modification of the idea.

When undertaking a study, consult an expert. In our present context we turn to the most accomplished authority on the image of death: the late Middle Ages. Huizinga writes:

> No other epoch has laid so much stress as the expiring middle ages on the thought of death. An everlasting call of *memento mori* resounds through life. . . . the popular preaching of the mendicant orders had made the eternal admonition to remember death swell into a somber chorus ringing throughout the world.[3]

Huizinga's writing defines three aspects of the fatal persona which will serve us as rubrics in our discussion. The first I shall

call the "ubi sunt" theme; the second, the decay of beauty; and the last, the Dance of Death, the *Totentanz* or *danse macabre*.

THE "UBI SUNT" THEME is crystallized in the first line of a verse from the old university song, "Gaudeamus Igitur"; the line reads: "Ubi sunt qui ante nos in mundo fuere"— where are those who were on earth before us? In the context of the song the theme of transience is the justification for the title concept; life is fleeting, therefore, let us rejoice. The verse itself is the distillation of the elegiac lament for the transience of earthly things.

The earliest expressions of this mood occur in anonymous Greek poetry; the very word "elegiac" comes from *elegein*, meaning to play on the flute, an instrument employed for solemn and stately song or lamentation. In Old English the theme occurs in a poem called "The Wanderer," dating from the 8th Century. The poetry of the Anglo-Saxon tongue has been accused of having as its prevailing mood the somber and barren bleakness of a winter landscape. The poem in question conforms to the description, dealing with the musings of a lonely exile, wandering the world after the death of his protecting lord. The speaker is inspired by the sight of some Roman ruins to a veritable frenzy of gloom; at the dramatic climax of the poem occur these lines:

> Whither has gone the horse?
> Whither has gone the [hero]?
> Whither has gone the giver of treasure?
> Whither has gone the place of feasting?
> Where are the joys of hall?
> Alas, the bright cup.
> Alas, the warrior in his corselet.
> Alas, the glory of the prince!
> How that time has passed away.
> Has grown dark under the shadow of night,
> As if it had never been![4]

The bleak mood is, in this instance, heavy with the sense of loss. This reminds us of the universal emotional response: the loss of another calls to mind the thoughts of transience—the transience of existence in general, notably our own—and the concrete proof of this transience in the absence of those "who were on earth before us."

Seven centuries later, in his "Ballade des Dames du Temps Jadis" (Ballad of ladies of former times), François Villon asked the same basic questions with apparent seriousness in his stanzas; however, he dismissed the answers with a mocking and ironic shrug in his refrain, *Mais ou sont lex neiges d'antan?* A typical stanza reads: (author's translation)

> Where is the lady Heloise, most wise,
> For whose sake Pierre Abelard was unmanned
> To become a monk at St. Denis?
> It was for love he suffered this fate.
> And where, too, is the Queen who ordered Buridan
> Thrown into the Seine in a sack—
> But where are the snows of yesteryear?

It is as meaningful, Villon implies in the spirit of his times, to ask after last year's snows as to lament after all the vanished beauties of the earth. Here death is considered from the persona of the hedonist, the dweller in the perpetual now, who refuses to allow the shadow to fall across his bright existence.

Some centuries later, George Gordon, Lord Byron was to use the "ubi sunt" theme in his comic epic, *Don Juan*. In that instance, the theme was just one of a number of borrowed literary and poetic devices which Byron pilfered or burlesqued under the aegis of comedy. In Byron's hands, the theme achieves the following satiric cast, as the poet speaks of his contemporaries:

> "Where is the world?" cries Young, at *eighty*. "Where
> The world in which a man was born?" Alas!
> Where is the world of *eight* years past? 'Twas *there*—
> I look for it—'tis gone, a globe of glass!
> Crack'd, shiver'd, vanish'd, scarcely gazed on, ere
> A silent change dissolves the glittering mass.
> Statesman, chiefs, orators, queens, patriots, kings,
> And dandies, all are gone on the wind's wings.
>
> Where is Lord This? And where my Lady That?
> The Honourable Mistresses and Misses?
> Some laid aside like an old Opera hat,
> Married, unmarried, and remarried: (this is
> An evolution oft performed of late).
> Where are the Dublin shouts—and London hisses?
> Where are the Grenvilles? Turn'd as usual. Where
> My friends the Whigs? Exactly where they were.[5]

Byron's was among the last formal literary invocations of the "ubi sunt" theme, with the exception of the modern popular song, "Where Have All the Flowers Gone," which ends on a note of consolation and the endurance of life. Elegiac, ironic, despondent and satiric—all these moods have constituted varied shades of the basic black.

THE SECOND ASPECT of the image of death—the decay of beauty—provides us with the elements most literally related to the concept of *memento mori* with which we began.

The *memento mori* came into existence because it fulfilled a specific need. Huizinga expresses it:

> . . . . the wistfulness of remembrance and the thought of frailty in itself do not satisfy the need of expressing, with violence, the shudder caused by death. The medieval soul demands a more concrete embodiment of the perishable: that of the putrefying corpse.[6]

It is obvious that the medieval soul did not, by instinct alone, savor so zestfully the spectre of decay. The church of the time found popular fear of death an advantageous state of mind to encourage for its manipulative value; with sermons and with the new popular art form, the woodcut, the mass mind had its attention concentrated forcibly on the skull grinning beneath the skin. Here was the essence of *memento mori:* it will all come to this.[7]

The roots of this spirit are sunk in an earlier tradition in the Anglo-Saxon works that had been under the Christian influence. An example by an unknown author is "The Soul's Address to the Body" that, in characteristically cheery Old English fashion, relates these ideas:

> Lo! thou didst little think to be the food of worms, when thou didst follow all the lures of pleasure; now in the earth thou shalt feed worms. . . . Henceforth they cannot take from thee the golden ornaments, neither gold nor silver, nor aught of thy gauds. . . . But here thy bones shall bide. . . . The head is cleft, hands disjointed, jaws gaping, mouth rent open; sinews are slackened . . . zealous worms strip the ribs . . .[8]

This, then, is the anatomy of death with a vengeance! This, moreover, is the statement of another parallel idea: the theme of earthly vanity—vanity, not with its modern connotation of preening narcissism, but with its literal force: in vain.

It is this spirit that makes Chaucer's *Troilus and Criseyde*, a work of the 14th Century, so difficult for the modern reader to accept. He is presented with, ostensibly, a courtly, passionate, and vivid (not to say, enthusiastic) love story, with his sympathies closely drawn to the characters and the action. At the tragic close of the drama, Chaucer simply washes his hands of his character's doom; he seems to be saying: "What can you expect from these loves of this world; it only goes to show that you would do better to keep your thoughts on the eternal love of heaven"—this, after he has portrayed earthly love as attractively as his considerable skill permitted. For Chaucer's audience there is no inconsistency in the dramatic structure here; no matter how graphically and sympathetically courtly love is depicted, it must be rejected in favor of a higher one, in accordance with the tradition of the time.

The artists of that time turned the spirit of vanity and decay into its grimmest form: that of the corpse bursting with the worms it contained. This was certainly the most widely prevalent image of death at the very start of the 15th Century—an image that was to endure for well over a hundred years. It represents the height of materialism in regard to death, focussing on the flesh in its corruption, even while lamenting the soul that is fled. Huizinga speculates on an intriguing motivation for this attitude:

> It would rather seem a kind of spasmodic reaction against an excessive sensuality.[9]

A forecast of this cultural "reaction formation" may be found in I Corinthians 11, where St. Paul exhorts the women, while in church, to cover the hair "that is a glory to them" because, one gathers, it distracts the mind from the spiritual by its sensual impact. The essential puritanism of both Paul and the subsequent Middle Ages, in other words, gave birth to the vision of corruption as the perfect cure for sensual temptations by means of a studied sensory disgust.

In the literary sphere, sentiments of corruption abounded. An anonymous poet wrote, in the persona of a once-beautiful woman:

> My flesh was very lovely, fresh and tender
> It is now all turned to ashes.[10]

Manifest in such thoughts is the oppressive feeling expressed by Marvell: "But at my back I always hear Time's winged chariot hurrying near"; indeed, Time and Death are often portrayed interchangeably with a scythe and an hourglass of running sands. Dürer, for example, in his "Knight, Death and the Devil," shows a grey-bearded, hourglass-brandishing Death that could represent to perfection the traditional Father Time.

The eras after the Middle Ages lacked the urgent religiosity to require such savage emphasis on the mortal state of man. Shakespeare, however, prescrves some of the flavor of the mood when he has Richard II reflect:

> . . . for within the hollow crown
> That rounds the mortal temples of a king
> Keeps Death his court, and there the antic sits
> Scoffing his state and grinning at his pomp;
> Allowing him a breath, a little scene.
> To monarchize, be feared and kill with looks;
> Infusing him with self and vain conceit,
> As if this flesh which walls about our life
> Were brass impregnable; and humored thus,
> Comes at the last, and with a little pin
> Bores through his castle wall, and farewell king!

In scattered modern works the theme of *memento mori* appears in a variety of new guises. Evelyn Waugh, in his bitter mockery of the American way of death, *The Loved One*, has his hero portray a dead friend lying in today's image of death:

> . . . With red protruding eyeballs and black protruding tongue
> . . . Here pickled in formaldehyde and painted like a whore,
> Shrimp-pink incorruptible, not lost, or gone before.[11]

e. e. cummings said it this way:

> Buffalo Bill's
> defunct
> who used ride a watersmooth-silver
> stallion
> and break onetwothreefourfive pigeonsjustlikethat
> Jesus
> he was a handsome man
> and what i want to know is
> how do you like your blueeyed boy
> Mister Death[12]

The "ubi sunt" theme and the theme of beauty's decay are related by the parameter of time, which both invoke in some manner, and which culminate in the *memento mori;* with the last, we come closest on the trail of the image of death with death as a personage, rather than as an attitude or mood. It is clear that Death *has* an image as a result of the symbolizing tendency of man's imagination. Faced with the incomprehensible, man reacts with fear; from this fear he shapes a symbol that becomes, by action on the senses, less fearful than its referent reality. The conceptual shift here implied was paralleled by a linguistic one: somewhere in the 14th Century the change took place whereby *le mort*—the dead one—became *la mort*—Death.

The origins of the fatal symbol can be traced back to the appearance of man *in statu morendi*, in the condition of death. Most famous of these appearances was the so-called Hippocratic facies, a term still used to describe the moribund patient:

> Nose sharp, eyes hollow, temples sunken, ears cold and contracted with the lobes turned outwards, skin tense and parched, face discolored, eyelids livid, mouth open, lips loose and blanched.[13]

But ten years after the Black Death had swept across Europe, Bocaccio was to write of the plague in 1358:

> . . . it began to show itself in a sad and wonderful manner; and different from what it had been in the East, where bleeding from the nose is the fatal prognostic, here, there appeared certain tumors in the groins, or under the arm-pits, some as big as a small apple, others as an egg; and afterwards purple spots in most parts of the body: in some cases large and but few in number, in others less and more numerous, both sorts the usual messengers of death.[14]

Centuries later, Edgar Allen Poe described a "rider on a pale horse" of a different color, that no reader can forget:

> The "Red Death" had long devastated the country . . . Blood was its Avatar and its seal—the redness and the horror of blood. There were sharp pains, and sudden dizziness, and then profuse bleeding at the pores with dissolution . . . And the whole seizure, progress and termination of the disease, were the incidents of half an hour.[15]

From these striking images of man in the state of death, we turn to images representing the agent of the process itself. All the mythologies of the world provided a deity or servant of a deity to take into his charge the rites, procedures, and transsubstantiations involved in the process of death. Death himself

appears personified in Revelations 6:8 as the rider on the pale horse; but he does not again begin to appear in personification in Western culture until the 1300's, where we shall focus our attentions.

THAT ERA MARKS the origin of the last and most important of the three faces of death we have been considering: Death as leader of the Dance of Death, the *Totentanz* or *Danse Macabre*.

Two ideas are central to this motif. First, there are no wallflowers in this dance; no one sits it out; in typical form,

> Death, personified as a skeleton, collects into a chain or Reigen representatives of all classes of human society, and dances with them to the grave.[16]

A single emblematic expression of this aspect of the Dance of Death is the medieval morality play, *Everyman*, written around 1485. Strategic quotes from the work will serve accurately to state the grim reaper's attributes as the time conceived of them.

> God: Where art thou, Death, thou mighty messenger?
> Death: Almighty God, I am here at your will, Your commandment to fulfill.
> God: Go thou to Everyman, And show him, in my name, A pilgrimage he must on him take, Which he in no wise may escape;
>
> Death: Lo, yonder I see Everyman walking: Full little he thinketh on my coming: His mind is on fleshly lusts and his treasure. . . . Everyman, stand still! . . .
> Everyman: I know thee not. What messenger art thou?
> Death: I am Death, that no man dreadeth [i.e., that fears no one].
>
> Everyman: O Death, thou comest when I had thee least in mind.
>
> . . . a thousand pound shalt thou have and defer this matter another day.
> Death: I set nought by gold, silver nor riches, Nor by pope, emperor, king, duke nor princes.[17]

In this sample, we have a clear expression of the universality of Death, along with other characteristics, echoes of which we have heard before in this study.

The second *Totentanz* motif is the sense of demoniac glee in the fiendishness of Death dancing. This latter point raises a question: why should Death lead a dance? If the idea to be conveyed is that Death is the world's only truly democratic institution, why do we not find the muster, the roll-call, or the conclave of Death? "Dance" conveys the sense of ritual or pageant and the idea of participation. Several sources[3, 16 et al.] suggest that actual performances of morality plays or pageants on the subject were held, perhaps, at first, in dialogue form, leading to the characteristic orderly, "one-by-one" pattern of the typical Dance. The term *danse macabre*, another name for the same motif, was apparently originally "danse Macabré," with Macabré assumed to be the proper name of a painter or writer of an early Dance of Death. Other authorities[18] suggest, however, that that word comes from the Arabic *magbarah*, a cemetery, or the "Chorea Maccabaeorum," Dance of the Maccabees, a dramatic form of the early Middle Ages. Still another interpretation was offered in 1826 by the scholar Gabriel Peignot[18] who

> investigated the origin of the Dance of Death in France, and explained the dancing positions of the skeletons, by the fact which old chronicles relate, that those who were attacked by the plague ran from their houses making violent efforts to restore their rapidly declining strength by all kinds of morbid movements.

Whatever the origin, we know only that France was central to the institution of this theme.

The oldest literary format (as opposed to earlier artistic and folk expressions) of an actual *Totentanz* is the poem "Dança General de la Muerte." This work was first ascribed to Rabbi Santol de Carrion—and an apter name could not be found—who lived ca. 1360, but the poem is now known to be the product of a priest of the early 1400's. It probably derives its own origins from the song, "Ad mortem festinamus"—we hasten toward death. In the poem Death exults, in a prologue, over the scope of his power. Then

> Death calls to men of every rank and station in life to join "la dança mortal" . . . Thirty-three orders of society are called by death, the clerical personages alternating with the secular. The physician has the 18th place.[19]

Each life station is highly individualized; this is no vision of the grave as a final melting pot, but an orderly and systematic dance ceremonial.

Translated into the visual realm, the image of death was traditionally that of a shrunken fleshy body without a true skull on top—the nose was usually intact as in life, for example—producing a figure that could be acted by a player with a mask. By similar conventions, joints were represented by transverse lines; the belly showed a longitudinal slit, symbolizing decomposition, but without viscera showing.

The most celebrated of the older Dances of Death was that painted at Gross Basel, the so-called "Tod am Basel," dating from 1480; even at that era of pitiful communications it was internationally known and was the destination of numerous pilgimages.

Of most interest to us here is the individual scene of Death summoning the physician. In that scene

> . . . death is remarkable in that it is a true skeleton [as opposed to a stylized figure] but with many inaccurate anatomical details; this is the first appearance of a true skeleton in any of the Totentanz paintings.[20]

These very inaccuracies place the work in the 15th Century, before correct skeletal anatomy was known.

The figure of death in the physician scene is shown playing a fife and pulling on the physician's robe. Over one arm the skeleton has the handle of a urine flask. This particular part of the physician's equipment seems to have caught the imagination of painters in the era before the stethoscope became a symbol of the medical art. The doctor, usually included in versions of the Dance, is always seen with a urine bottle. Death either hands it to him over his shoulder; breaks it contemptuously; or, appropriately, urinates into it. Today's medical student, with his own forced acquaintance with the urine flask, can well appreciate the coarse and insulting aspect of the symbolism here.

Dominating the portrayors of the *Totentanz;* spawning a horde of imitators; and becoming almost synonymous with the concept of the artistic Dance of Death, stands the figure of Hans Holbein, the Younger. Three versions of the theme bear

his mark: the Dagger Sheath, embossed with the Dance of Death; the Alphabet of the Dance of Death; and the Imagines Mortis.

The series of engravings now called the Dance of Death was probably completed around 1530; in 1538 the series appeared in book form in Lyons. Paradoxically, the greatness of Holbein's death-dance is in its unique vitality. The scenes of the various professions and classes are drawn from life;

> Every man pursues his own occupation, whether worthy or unworthy.[21]

In many scenes, the human participants are unaware of the grim intruder into their erstwhile security; in others they violently protest. In the scene of the physician, the doctor and his elderly patient indicate by their attitudes that they are quite unaware that they have called in an unexpected "Death consult."

The figures themselves are modified semi-skeletons—a form allowing a wide range of expressions impossible for the bare bones.

> [The figures] appear upon the scene, not as guides for departing souls to the land beyond, but as active, malicious, and malevolent spirits, leering and capering in glee over the sad joke they are about to perpetrate upon the unfortunate victim.[22]

Holbein's was the peak of portrayal in art of the Dance of Death; the imitations that followed him over the centuries turned in the direction of caricature. This latter trend reached its own peak in England in the first thirty years of the 19th Century in a crop of poorly-executed, grotesque and vulgar hand-colored prints. One such print shows three doctors in a fist-fight over a consultation, with Death helping up a fallen fourth doctor to return to the fray. The caption reads

> When doctors three the Labour share
> No wonder Death attends them there.[23]

In the Modern era, after the second half of the 19th Century, the visions of death focus to a much greater degree on the individual and his personal, rather than human, tragedy; both the "elemental tragic atmosphere" and the implied morality are gone, and, as the scholar Buchheit puts it, we are left with

> only the translation of a great mythus into the plebeian diction of a century which has no God.[24]

Two images of the period do stand out; done in 1851, they are the work of the 19th Century German artist, Alfred Rethel. The first, called "Der Tod als Erwurger," is an arrestingly medieval conception, inspired by Heine's account of an outbreak of cholera at a masked ball in Paris in 1831. In the engraving, three corpses lie in the shambles of the masque; in the background the spirit of pestilence is enthroned, and dominating the foreground is a cloaked figure of skeleton Death, playing on a femur as violin with a fibula as bow. This scene calls to mind Poe's "Masque of the Red Death"; it is possible that the original historical incident served as a common inspiration for both these works. In any case, the starkness of the pictured scene stands in sharp contrast to Rethel's companion piece, "Der Tod als Freund"; in the belfry of a church, Death in pilgrim's robes tolls a symbolic vespers for the aged bell-ringer who sleeps his last in a chair nearby. Here is the foreshadowing of the later outlook on death as a rest for the weary soul; it is a most unmedieval scene of tranquility and peace.

The most modern version of a formal *Totentanz* is the series of engravings by Percy Smith entitled "The Dance of Death—1914–1918". An example from these plates that depict the horrors of war in modern times is a scene entitled "Death Awed": the figure of shrouded Death stands alone on a scarred and empty field of war-torn desolation, gazing with an expression of shock and revulsion at a pair of military boots from which protrude the shattered bones of human legs.[25]

ONE FINAL ASPECT of the theme of the Dance of Death remains to be considered. Women were, in general, excluded from the early dances of death until 1486, when there appeared a "Danse Macabre des Femmes": thereafter, women, as well as men, were invited to the fatal fling. From these roots, in the 19th Century a specific motif emerged, recognizable as a single scene from the panorama of the *Totentanz*. This motif was the confrontation of the archetypic maiden with the figure of Death. The origin of this theme is most likely the poem of Matthias Claudius (1740–1815) entitled "Der Tod und Das Mädchen," where the following dialogue occurs:

> Maiden: Pass by, oh! pass me by,
> Mad man of bones,
> I am still young, go, rather,
> And clutch me not!
> Death: Give me your hand, lovely, frail image,
> I am a friend, and do not come to punish.
> Be of good heart! I am not unreasonable!
> Gently should you sleep in mine arms.[26]

This confrontation blends the medieval idea of death coming even to the young and striking down beauty, with a new idea of death as seducer into sleep eternal. A century after Claudius, John Crowe Ransom echoed this in his "Piazza Piece":

> I am a gentleman in a dustcoat trying
> To make you hear. Your ears are soft and small
> And listen to an old man not at all;
> They want the young men's whispering and sighing.
> But see the roses on your trellis dying
> And hear the spectral singing of the moon—
> For I must have my lovely lady soon.
> I am a gentleman in a dustcoat trying.
>
> I am lady young in beauty waiting
> Until my truelove comes, and then we kiss.
> But what gray man among the vines is this,
> Whose words are dry and faint as in a dream?
> Back from my trellis, sir, before I scream!
> I am a lady young in beauty waiting.

Thus far in our survey we have examined death from three viewpoints: the snows of yesteryear, the faded beauty, and the Dance of Death. There remain for us certain important images of death that do not fit these categories well, and we will give some consideration to images of death in the contemporary world.

Milton employed a grim symbolism in his picture of Death, the offspring by Satan out of Sin. Guarding Hell's gate is

> . . . . . the other shape
> If shape it might be called that shadow seemed,
> For each seemed either; black it stood as night,
> Fierce as the Furies, terrible as Hell,
> And shook a dreadful dart; what seemed his head
> The likeness of a kingly crown had on. (*Paradise Lost*, *II*, 666–673)

Clearly, this is an imageless image of Death. Milton conveys effectively, by this faceless form, the unexpected anonymity of death: no one knows what form it will take for himself.

Milton's rather fiendish and martial death is the polar opposite of the 19th Century's concept of a limp, pale, swooning mortality. This effeminate interpretation is realized in a female death-figure in Swinburne's "The Garden of Proserpine":

I am tired of tears and laughter,
And men that laugh and weep;
Of what may come hereafter
For men that sow to reap:
I am weary of days and hours,
Blown buds of barren flowers,
Desires and dreams and powers
And everything but sleep.

There go the loves that wither
The old loves with wearier wings
And all dead years draw thither
And all disastrous things;
Dead dreams of days forsaken,
Blind buds that snows have shaken,
Wild leaves that winds have taken,
Red strays of ruined springs.

We recognize in these stanzas many aspects of the image of death that we have earlier considered; the mood here, however, is the essential characteristic. Swinburne summarizes himself in the last line of another poem, "Hymn to Proserpine": "For there is no god stronger than death; and death is a sleep." Only the neurasthenia of the 19th Century's literary ideal could fittingly conceive, as Keats wrote, of a "swoon to death," where death is linked to sleep and not to time.

A decade later, Thomas De Quincey, who became, with his *Confessions of an English Opium Eater*, the most famous junkie in literature, described an incident that he witnessed while riding an English coach. The incident, entitled "The Vision of Sudden Death," relates how De Quincey, riding a coach gone out of control, witnesses the near destruction of a fragile carriage in which two lovers are riding:

> From the silence and deep peace of this saintly summer night—from the pathetic blending of this sweet moonlight, dawnlight, dreamlight—from the manly tenderness of this flattering, whispering, murmuring love—suddenly as from the woods and fields—suddenly as from the chambers of the air opening in revelation—suddenly as from the ground yawning at her feet, leaped upon her, with the flashing of cataracts, Death the crowned phantom, with all the equipage of his terrors and the tiger roar of his voice.[27]

What forms does Death assume in the modern world? Certainly all the basic issues have been thoroughly clouded. There exists a new "science" of thanatology[28] devoted to the study of criteria for death. For the ancients such questions were meaningless: death took place when the soul left the body. For the modern physician, in this era of visceral prostheses, it has become necessary, not only to define death, but to legislate the fatal moment, using such indices as spontaneous cardiac function, reflexes and the EEG to evaluate a patient whose heart, lungs, brainstem and kidneys have been supplanted by surrogate machinery.

The cinema has presented several images of death that contribute little original to the old forms. Death in "Black Orpheus" was a modernistic skeleton costume on a human figure; Death in "The Seventh Seal" was a pale-faced person in black who led a human chain in a death-dance in the best tradition. Hollywood abounds in images of melodramatic death: the gunfighter Wilson in "Shane," who mocks the vision of a "pale horse, pale rider" with his black hat, black gloves and black horse; the besieged cavalry officer obviously doomed when he says, "When this is all over, I think I'll settle down on a little farm"; and the character dying of the rare Hollywood disease—a syndrome pathognomonically defined by its namelessness, the helplessness of medicine before it, and the utter absence of symptoms other than a great mildness of manner.

All the foregoing images of modern death are fictional or symbolic. The following real obituary stands as the challenging face that real Death presents to medicine today; the causes of death, theoretically curable today, were in reality as fatal as in the time of Hippocrates:[29]

> Died: Bud Powell, modern jazz pianist, at the age of 41, in the summer of 1966—of malnutrition, alcoholism and tuberculosis.

From the host of chords that could be struck on our theme, we have been able to sound only a few selected notes. In our survey, we have gazed at many faces of the grim reaper, as mankind has viewed and portrayed him through the ages, as an emblem of despair, of fear, of rest, and of artistic inspiration. I feel, however, that there has been no better statement of the relation between man and his fate than this quatrain by Walter Savage Landor:

Death stands above me, whispering low
I know not what into my ear;
Of his strange language, all I know
Is, there is not a word of fear.

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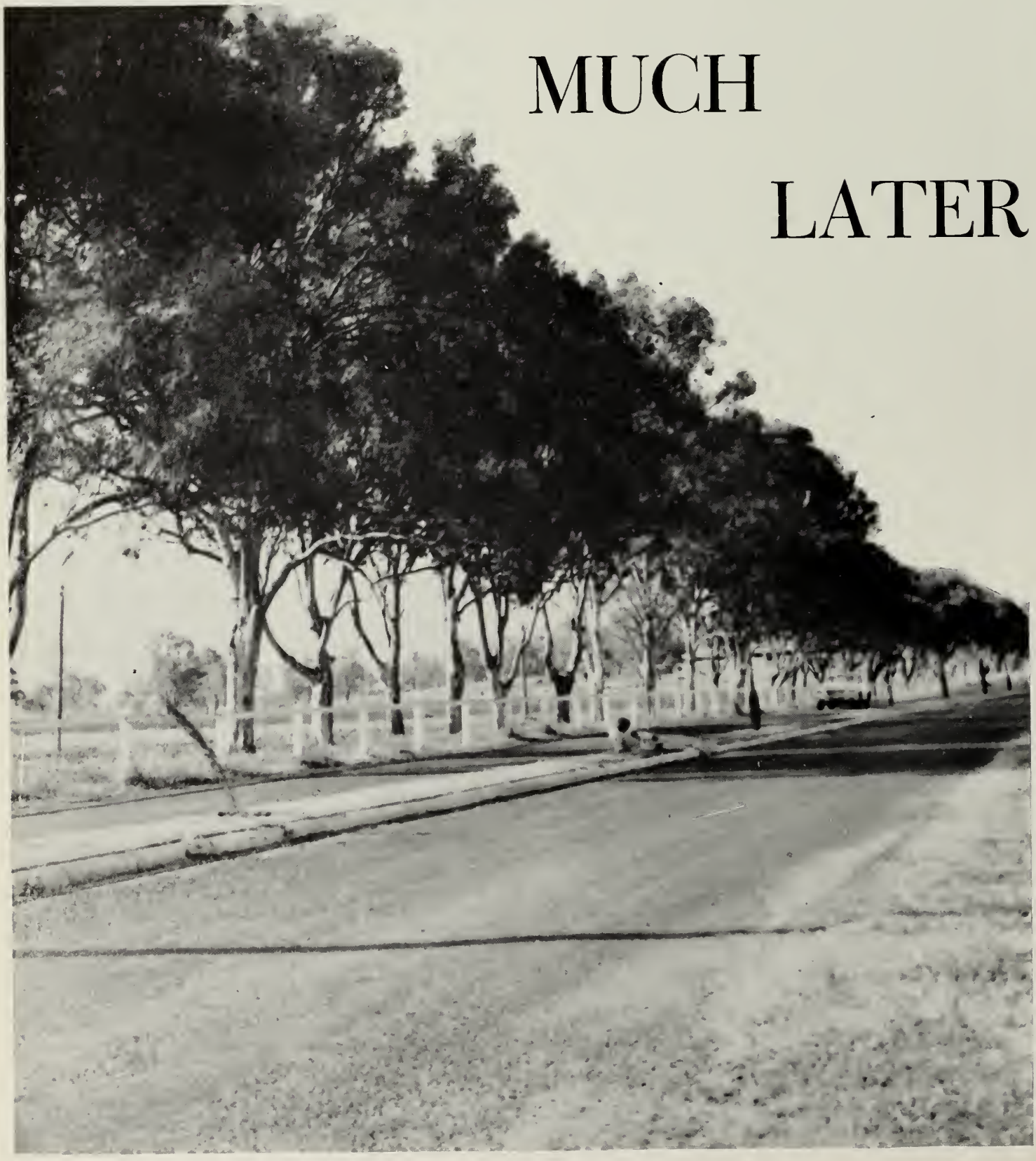
by Eric R. Sanderson '37

DOWN UNDER MUCH LATER



WARNINGS of the dire results of looking back have appeared in the literature from biblical times (Genesis 19:26) to the more recent musings of Mr. Satchel Paige. Lot's wife did, you recall, and was turned to a pillar of salt forthwith. Mr. Paige, more careful, wouldn't.

"Somebody might be gaining on you," he said.

Aware of possible repercussions, it seemed reasonable nonetheless to take a second look at Gatton, Queensland recently. For one thing, my wife and I found ourselves in Brisbane and that is quite near Gatton. For another, it soon will be 25 years since the 105th General Hospital, the Harvard Unit that went west, descended on the village and the Queensland Agricultural College, some four miles out of town. The opportunity to reminisce on the events of a quarter of a century before was too good to pass up. The need to fill in the blanks after we left seemed great.

When we arrived in mid-1942, Gatton was a town of a few hundred people. Its one dusty street and its few stores, depleted of their stocks, offered little to entice the alien soldier. You would bicycle right in there and right out again but for an imposing building at the corner of the main street by the railroad station.

"ROYAL HOTEL," it said on the facade. "1914."

Two stories high, surrounded by a veranda on the second floor, shaded by one large tree, it looked like a hundred other country hotels in a hundred other little Australian towns. The austerity of the exterior gave little indication of the warmth within.

The character of any hostelry soon becomes that of the reigning spirits in charge, in this case Mr. Bullwinkle, Publican, his wife, Mrs. Bullwinkle and their charming daughter, Miss Bullwinkle.

Mr. Bullwinkle presided over the pub. Many a medical officer found it therapeutic to bicycle in to the Royal Hotel of an afternoon, to sip Castlemaine's XXXX beer, the staple tipple of the land, to speak of this and that with the proprietor and to pedal shakily back to the hospital as the sun sunk slowly behind the hills. Four X is mother's milk to the natives down there and in no time at all we adopted it as our own.

The rest of the hotel was Mrs. Bullwinkle's. She presided over the serving of meals when we grew tired of hospital fare and were looking for diversion. She saw to it that a sort of club room was available on the second floor for our post-prandial enjoyment and even set up small rest centers on the balcony for those too weary to proceed further. A quiet woman, as I recall, and yet effective. Nobody got out of line ever, unless you want to count the time one of the fellows fell out of the tree but that could happen to anybody. I certainly wouldn't want to fault Mrs. Bullwinkle for that one.

Miss Bullwinkle's image is quite hazy. I got the impression she spent most of her time being guarded from the Americans. She did lend the place an air of dignity, serving to remind us that certain standards were to be maintained, war or no war. Young maidens often do that.

The real center of our official activity was at the College. There we took over the existing plant and expanded it with a number of wards and supply buildings, with tents and outbuildings, enough to house a hundred or more officers, nurses galore, enlisted men in droves and patients in the thousands. Together, we built and maintained a small American island in the fertile Australian valley. The memories built up by all those people over the two-plus years we were there have now stretched to the edge of a quarter-of-a-century with the promise of going on until the last old soldier among us bites the dust.

Every generation seems to need a war to fulfill its destiny. There is the excitement at the time and then for all the years to come, there are the memories. At times they are so strong that some people seem never to have returned from their war at all. Hardly a day goes by but what their recollections crowd their thoughts and deaden their conversations.

So now it is much later, time to bring the world back into focus again. What has happened to Gatton in the meantime? Do they miss us at the corner pub? Do they think kindly of us at the Queensland A. C.? What hath God wrought in the valley, and what have the Australians been up to during our absence?

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"Let's spend the day in Gatton," I said to my wife. "Let's get on the train in Indooroopilly, toot along out to Gatton, see the town and the college and come back in the evening. Like old times."

"Let's not," she replied. "I refuse to go out there on the train. It's slow and noisy and dirty. If you go on the train you go by yourself."

"Let's take the bus, then," I said. "You know I won't drive among these crazy left-handed Australians. Come on. Let's take the bus."

"All right," she agreed. So we did.

The trip out through Ipswich is just as dull as we remembered it. The country is still pretty dry and not very lush. There are a few more cows, a few more houses, some scraggly trees, patches of ant hills, and that's about it. When you get within a few miles of Gatton, it all changes. Here the grass is green, the black earth is rich with promise and the general air is one of prosperity on all sides.

We whizzed past the drive in to the College, bound for town. "The cattle crossing is gone," said my wife.

"They've widened the road, too," said I. "Look. Four lanes and a boulevard in the middle."

From the College in to town the whole area has changed. Petrol stations dot the road side. Farm Implement stores are interspersed with groceries and small restaurants. Where the world seemed almost to end, there is now a sign that says "Gatton Jubilee Golf Course"—with grass greens and a club house.

The bus turned the corner and pulled up a block down the main street. We got out.

"Good heavens," I said. "It's like New York."

"Not quite," said my wife. "But hasn't it grown?"

Sleepy little Gatton has indeed come alive. It is a real swinging town these days. The dust is gone from the main street now and bitumen stretches from curb to curb. Arc lights run up the middle and cars are parked in profusion. A large new brick edifice dominates the landscape.

"Gatton Civic Center" it says on it. It staggers the imagination. We gazed around in amazement. In your mind's eye you expect things to freeze just where they were when you saw them last, but they never do.

"Look," said my wife. "There is a Woolworths. And there is a super market and a jeweler's and two new banks and a Holden Agency."

"Let us retire to Bullwinkle's," said I. "Quickly. It will take some time to adjust to all this. We need a quiet spot to think things over."

The Royal Hotel has not changed much. The tree is gone and a bit of the balcony has been walled in, but aside from that, it's not much different from the outside. We walked in and asked after Mr. Bullwinkle.

"Bullwinkle, Bullwinkle," mused the wife of the current proprietor. "Oh, yes, I remember now. He was four publicans back, I should think. I haven't the foggiest where he went or where any of them are now. My husband might know, but he's off at the races."

"Well, do you mind if we look around a bit? We were here with the Americans during the war and we spent quite a bit of time here at the Hotel."

"Ah, yes," she answered vaguely. "We weren't here then. But you can look around if you wish."

The first thing you notice is that the pub has been enlarged and in the doing has lost its intimate appeal. Light, airy and almost sterile, it has shed the charm and character of yesteryear. There is no resident philosopher to compare with our old friend. Four X they have in abundance but drinking is a way of life and something vital is missing.

We went upstairs and looked around. They've dispensed with the common room and the balcony is just a balcony now. At the end of the hall there had been a magnificent old w.c. When you pulled the chain, a tremendous whoosh announced to the whole hotel that a seat would be available shortly. Now that has been renovated and everything is ceramic tile and formica and little squares of vinyl. And silence reigns.

To the east of the hotel there had been a vacant lot. Now there is the Royal Lounge, an annex to the hotel, where there is regular activity in the beer garden each day with a floor show on Saturday nights. They cater to large dinner parties and community bashes of all sorts.

Lunch time found us chewing thoughtfully on the mixed meat and veg cold plate in the small dining room, little changed since our time. The Gatton Rotary Club meets there each Wednesday noon. On the wall, small pennants abound from the Rotary Clubs of Wagga Wagga and Maroochydore, from Kota Bahru and Kowloon, from Tokyo and Grosse Point, Michigan and Southern Pines, North Carolina.

"Is there no small banner from West Roxbury or Jamaica Plain?" we wondered. "Have the Rotarians of Greater Boston never heard of Gatton and what it means? Or, for that matter, vice versa?"

"Never mind," we thought. "Things will be different at the College. Here we have been forgotten. There they will remember."

The cab fare to the hospital came to a dollar and I must say it beats riding a bicycle. In minutes we were rushed out the back way, a hard surfaced high speed highway, up the little hill and smack into the middle of 25 years ago. Deposited in front of the Headquarters Building, by the circle with the flag pole in the middle, almost nothing had changed. All the buildings around the drive were intact. The water tower, the Nurses Quarters, the Officers Club, the Officers Quarters, Ward 21, the Medical Ward, the X-ray Department and the Surgery, the Admitting Building and the Records Building were just as we had left them; older and assigned to other purposes, but in form much as they were.

We went in to the office and introduced ourselves to the secretary.

"We were here with the Americans during the war," we said. "Do you mind if we look around?"

"Ah, yes," she replied. "I remember. I was just a little girl then. We lived over on the edge of the campus. I remember the Americans."

"Oh good," we said. "We were beginning to think nobody did. Tell us, is there anything here to show that we passed this way? A plaque, or a memorial tablet, or a tree, or something? A lot of people spent a lot of time around here. Didn't we leave any mark at all?"

"I don't think there is anything," she replied with some hesitation. "Why don't you look around and when you come back I will let you know what I can find out about it? I just don't remember seeing anything like that."

We walked to the old nurses quarters and my wife couldn't go in because that was full of men students. We went to the officers quarters and I couldn't go in because that was full of girls who were the maids for the student dormitories. We walked through the old x-ray department. Gutted. In the middle of the space stood a table with samples of wool set up for the wool sorters examinations. The old surgery was stuffed with junk. Old Ward 21 is a large class room, soon to be demolished. We walked around and reminisced. As we did so a gentleman approached.

"You right?" he asked, which is Australian for "May I help you?"

"We are just reliving old times when we spent a considerable period of our lives out here with the Americans," we said. "We have been wondering whether there isn't something to show for the fact that thousands of Americans spent a couple of years here. Are there no shrines or memorials of any sort? Has our whole generation been sunk without a trace? Have they rewritten history and left us out? We have not been able to find a thing to indicate that we passed this way at all."

"Yes," he replied. "There is something. There is evidence that you were here and I will show it to you. Come this way."

Standing in the corner of Ward 21 there was an old desk chair.

"Look on the back," he said.

We did.

"Nydegger," it said, in faded white paint.

"Wasn't he one of your chaps?" the man asked.

"He certainly was. Captain Robert Nydegger, late of Ward 21 of the Orthopedic Service of the 105th General Hospital. He will be flattered and pleased to learn that he alone of the whole outfit has had his name recorded in history."

"Yes, I suppose he will," said our friend. "I really don't think there is anything else. We moved out the day the original Station Hospital took over and we moved back in the day after the General Hospital moved out. Gradually we're tearing it all down. Lucky you came when you did. Next year this will all be gone."

We continued our tour. The old tent area now houses a large grandstand, dressing rooms and an olympic-sized swimming pool. The old admitting building is intact but they have driven a large post in the middle of the drive in front, like a stake through the heart.

"There," it seems to say. "None of you Yanks come through here again."

MANY of the old landmarks have been torn down to be replaced by beautiful and functional buildings of modern design to feed, house and educate the students. The old G.U. ward, the tennis court and the officers medical ward have not been razed but soon they, too, will be gone.

We wandered slowly back to the Headquarters building to take our leave of the secretary.

"Did you unearth any more evidence that we were here?" We repeated our plea plaintively, sounding for all the world like Rip Van Winkle. (Does no one remember poor Rip Van Winkle?)

"I don't believe there's a thing," she said softly, kindly. "No one seemed to know anything about it. I'm terribly sorry."

Solemnly we took our leave, walked thoughtfully down the road all the way to the main highway. We sat on the grass in the warm sunshine.

"Too bad to be wiped out but for one small bit of flotsam, isn't it?" I asked. "Do you think something might be done about it?"

"Like what?" my wife questioned. "I suppose we could ask the Boston Rotarians to send a small pennant to the Hotel."

"I was thinking more of sneaking back in the dead of the night and painting "VERITAS" on the water tower."

"No good," she said. "This place has given you 25 years worth of fond memories and you also have me to show for it. You should be grateful. Why don't we see if we can't have them plant a tree in our memory on the 25th anniversary of your arrival?"

"That's a thought," I replied. "Let us refer it to the high command where decisions are made."

A car pulled up and we thumbed a ride back to town.

There is a new hotel in Gatton at the other end of the street from the Royal Hotel, down by the Civic Center. It has a pub, a lounge bar and a sort of patio with tables for ladies, a dart board and six or eight brightly colored cockatoos hanging around in cages. The bar maid is brisk, neat and efficient. She is not in the least like Mr. Bullwinkle.

We had a couple of beers and got back on the bus.

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René Leriche

Surgeon of Pain, Physician of Anguish

by Fredric Jarrett '67

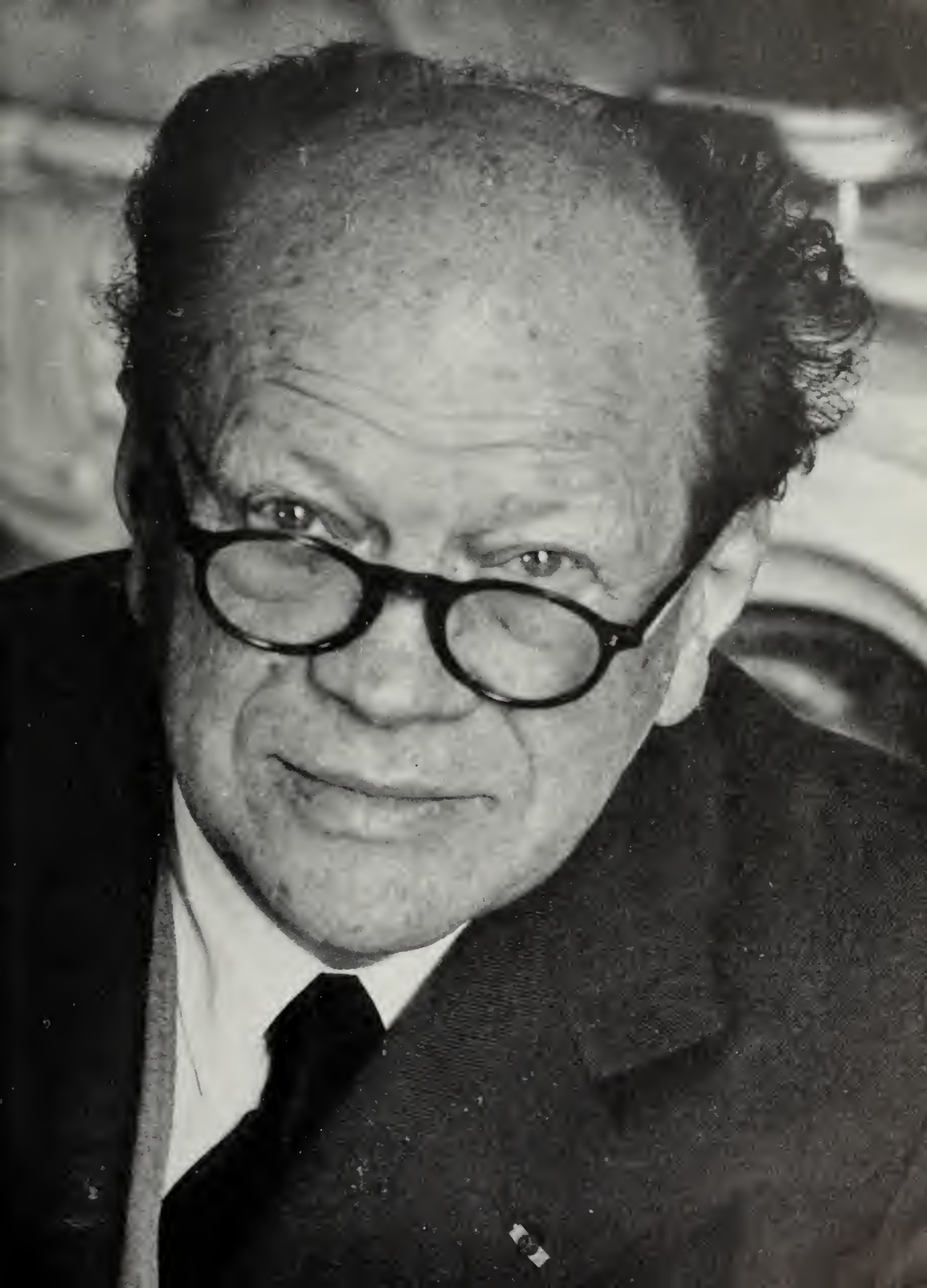
When *The Philosophy of Surgery* appeared in 1951, Rene Leriche already was an elder statesman of the healing arts. His election that year as president of The International Society of Surgery marked the homage not only of French surgeons but the respect and admiration of surgical leaders the world over. In 1937 he had been named to the chair of experimental medicine at the College de France, the premier chair in France, becoming the first surgeon to occupy the professorship once held by Claude Bernard, Magendie, Brown-Séquard and Charles Nicolle. He assumed the role of spokesman for the French medical profession during the difficult years of the occupation. But it was Leriche's overriding humanitarian concern that endeared him to his patients and colleagues. He once wrote, "The patient that we operate on is not merely a physiological machine, he thinks, he fears, his body trembles if he does not have the comfort of a vision of sympathy. Nothing can replace for him the beneficial contact with his surgeon, the exchange of glances, the feeling that he is taken in hand with at least an apparent certainty of winning."

Professor Leriche's sensitivity and humanitarian sympathy must have been the foundations for his lifelong interest —the surgery of pain. His classic work, *La Chururgie de la Douleur*, first appeared in 1937, dedicated to Charles Nicolle, his predecessor at the Collège de France; subsequently it went through three editions and translations into several foreign tongues. In his research on pain he spoke of the constant need of "juxtaposing the pathologic analysis and the therapeutic idea," always seeking some therapeutic insight from a knowledge of the pathology, as well as some glimpse into the basic disease process from careful treatment. Between 1910 and 1936 Leriche performed over 200 gasserian or retrogasserian neurotomies and some 500 operations on the sympathetic system, in addition to many rhizotomies and peripheral neurotomies —all of these for various *syndromes doleureux*—tabes, aortitis, causalgias, painful amputation, Raynaud's disease, scleroderma, and malignancies. He taught that pain was not a laudable sixth sense and was not essential for life, but was the central manifestation of both peripheral stimuli and vasomotor phenomena.

As a youngster Rene Leriche received a religious schooling where he learned to be "understanding, helpful, liberal, and good." Throughout his youth he dreamed of going to Saint-Cyr, France's military academy, and to further this he undertook a rigorous preparatory study in philosophy and sciences. Then, suddenly, after leading his class, he decided to forego Saint-Cyr to become a surgeon. He entered the Faculty of Sciences at Lyon to prepare for its medical school, from which he graduated in 1906.

Early associations weighed heavily on Leriche's development. As a student and young surgeon he was very much influenced by Antonin Poncet, his chief of service, who was a constant source of encouragement during the residency years. In 1909 they collaborated in writing and publishing two volumes on the surgical treatment of tuberculosis. It was on Poncet's service that Leriche, articulate and quick, passed easily through the successive stages of French surgical training—intern, prosector in anatomy, chef de clinique, agrégé in surgery in 1910—seeming rather to enjoy the brutal examinations where one's success was often determined by the whims of the examining jury and the influence of one's mentor. Held back by politics in the competition for "chirurgien des hôpitaux," and being very shaken by Poncet's death in 1913, he briefly considered immigrating to the United States in 1914, but the outbreak of war eliminated this alternative.

As a student he also worked under Alexis Carrel, then a surgical resident and later a Nobel laureate at the Rockefeller Institute. This future creator of arterial surgery was the first important influence on Leriche's career—he later spoke of him as the finest surgical technician he had known. Each evening for six months they examined patients together. Chance had placed them in the same boarding house and often their discussions continued very late into the night as they strolled together beside the River Sâone. Years later Leriche wrote of owing Carrel the most crucial part of his early training—the discipline of observation; and he always remained grateful for that precious boon to a young man—"the precocious, unselfish and at-



tentive friendship of an older colleague."

Carrel was difficult to define: he had a precise, subtle intellect, capable of the highest idealistic speculation and yet he was possessed of a certain reserve which made him cautious and slightly aloof. When Leriche visited him several years later at the Rockefeller Institute, Carrel was immersed in his research on organ transplantation. He had exchanged the kidneys between two cats, as well as a small piece of aorta and vena cava—a perfect operative success, but the animals died suddenly two weeks later.

Leriche was surprised at how much Carrel had been broadened by his American experience while still retaining his nationalistic fervor and dreaming of the intellectual and moral reform by which France would regain its place in the world.

It was Carrel who introduced him to some of the most dynamic men in American medicine and surgery; to Simon Flexner, for instance, who immediately offered to put Leriche in contact with any surgeon he might want to see in the United States. He visited the Roosevelt and German hospitals in New York; in Chicago, he was received by John Murphy and Evarts Graham, and in Boston by Harvey Cushing. But the high point of his tour was a visit to Baltimore where he spent several days with Halsted. It was an event he thereafter credited as one of the most decisive in his surgical career. "If I argued for the scrupulous and bloodless operation," he wrote, "and if one day I had the idea of the 'maladie post-operatoire' it was in drawing inspiration from Halsted's thought."

When war broke out in Europe in 1914, Halsted, although impregnated with German culture and numbering many German surgeons among his friends, embraced the Allies' efforts with great warmth. Early in the war he wrote to Leriche at the front expressing his confidence in the eventual triumph of the Allies, and mentioning that he had "indiscreetly" subscribed to one of the larger New York dailies in Mme. Leriche's name "to show where American sympathies lie." In return, Leriche sent him several hundred photographs of the war wounded. A month later, another letter arrived from Halsted, this one containing a check for 100,000 francs: the Baltimore surgeon had displayed the photographs in a room at his club, and solicited an entrance fee. The check was for the wounded French soldiers.

It was in thinking of Halsted that Leriche later formulated his ideas of a "*chef d'école*," underscoring the necessary attributes of unselfishness, sincerity with one's self and with facts, and liberalism of ideas. In *The Philosophy of Surgery* he wrote, "An intellectual personality is necessary, a characteristic way of placing oneself before what one sees, a penetrating way of thinking, and finally a way of understanding therapy." In addition, he felt that a total unselfishness was required—unselfishness both in the realm of ideas and of material benefits. In this connection he was fond of quoting an incident about Halsted: In 1921 Walter Dandy had just published the results of his first fifty ventriculograms, and he confided to Leriche that the original idea had been Halsted's, but on submitting the article to his mentor Dandy had been advised to strike out the suitable acknowledgment on the grounds that it would not add to a rising reputation to announce that the idea had not been his own.

In all the surgical centers that Leriche directed his modesty and intellectual enthusiasm were brought to bear. At Bouleuse, during the World War I, he wrote discerningly on the treatment of fractures and commenced his studies of the circulatory system. After the war, he practiced surgery in Lyon. When he was appointed Professor of Clinical Surgery at Strasbourg in 1924 he hoped to realize in his own service what had impressed him so in Baltimore. "In all he studies," he wrote, "a man must never consider only himself. Egoism is the source of error—it is always necessary to put yourself in the opponent's place, and in the place of what you seek to know." His Strasbourg clinic became a mecca for surgeons interested in the circulatory system and the neurovascular control of pain—Alexander Brunschwig, Michael DeBakey and James C. White were among the Americans who studied there.

In 1937, Leriche succeeded Charles Nicholle as Professor of Experimental Medicine at the Collège de France. Although this is the most prestigious chair in France, the professor is not provided with any clinical facilities in Paris; for the remaining years of his career Leriche operated almost exclusively at the American Hospital at Neuilly. Each year the professor must deliver and publish a series of lectures—Leriche's first volume was the well-known *Surgery of Pain*, followed by lectures on surgical pathophysiology which expanded his earlier research with Policard.

Early in his career, surgery was still dizzy with its newly acquired technical advances, as well as new avenues opened by the preclinical and clinical disciplines. Although Leriche was an excellent technical surgeon, he attempted to devaluate the manual aspect of surgery and underscore its more scientific demands. He saw surgery not merely as a branch of medicine, but as an area of knowledge, an experimental science practiced at a level of high intelligence and as a means of exploring the great problems of biology and medicine.

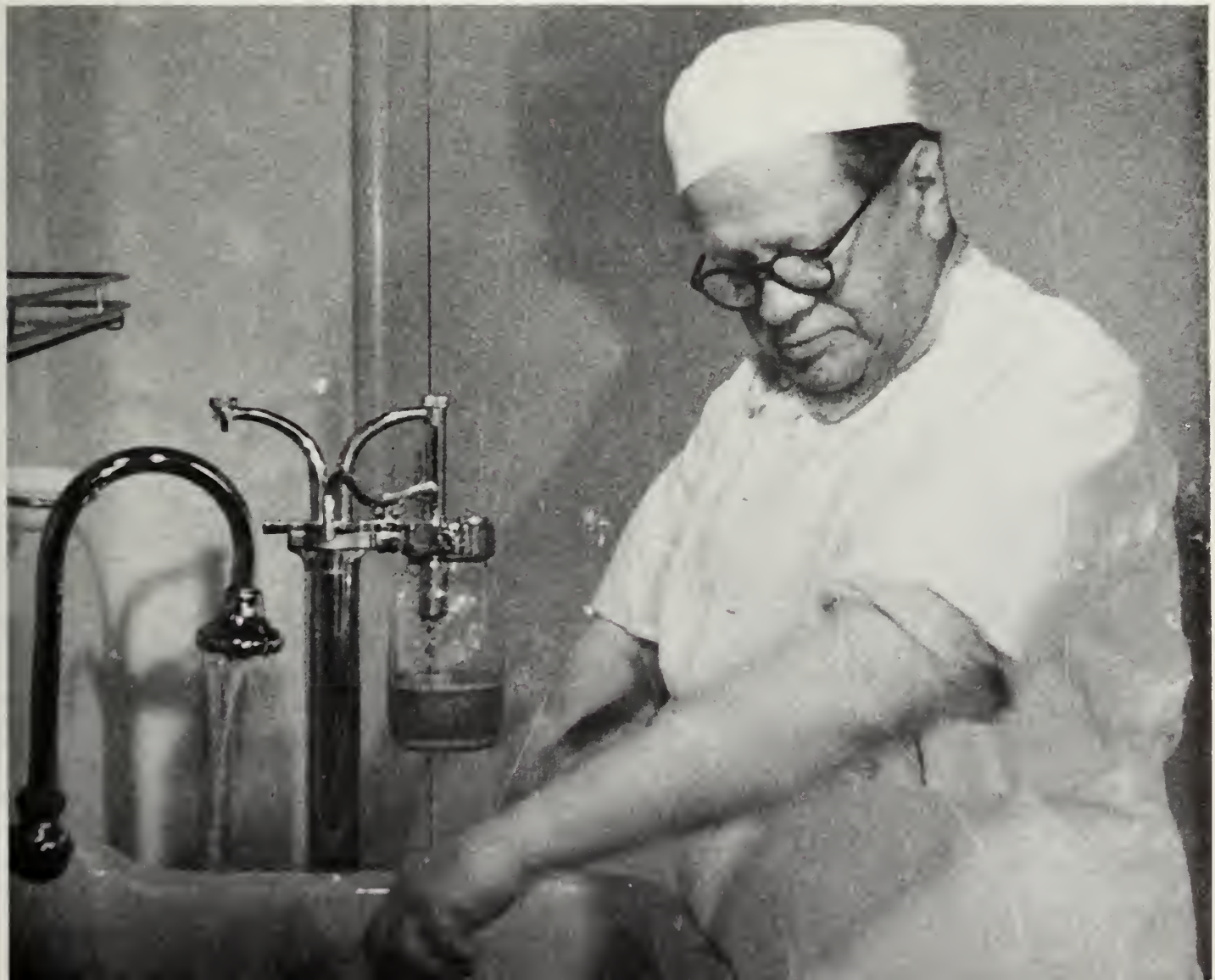
His inaugural lecture at Strasbourg in 1925, set the stage for a whole new way of thinking in surgery. He had looked with dismay at the tendency to overestimate the role of operative techniques and in his address entitled "Physiological Surgery," he promulgated his own view that the patient must be studied as a whole. Here for the first time pathology was seen as stemming from an alteration in normal physiology which precedes any ensuing anatomic change. Leriche was subsequently the creator in France, as were Halsted and Cushing in the United States, of physiologic surgery—a therapeutic approach using an understanding of the neurovascular and endocrine systems to treat functional derangements by seeking to restore function to diseased parts. Previously most surgery had been destructive or ablative. He outlined a surgery which aimed at disorders of physiology in addition to the correction of anatomic lesions, a physiological surgery which addressed itself to correcting perturbations of vasomotor innervation and abolishing painful syndromes, to alleviating hypertensive states and correcting endocrine imbalances.

In his presidential address to the congress of the Association Française de Chirurgie in 1933, and in his inaugural lecture at the Collège de France in 1938, his thoughts slowly evolved, and he outlined the avenues surgical research must take and the pitfalls it must avoid. In the 1930's he explored the range of biologic and chemical changes which are unleased by the surgical act per se—a combination of vasomotor, humoral and hematologic changes. Certainly many of these details were known before the 1930's, and most of them have since been explored in greater depth by Francis Moore and others, but Leriche

was the first to accord them the title of a distinct entity—"la maladie post-operatoire." He always persisted in viewing surgery as an undertaking requiring great intellectual and moral force. He summarized his feelings on this subject, as well as his general philosophy in 1951 during his presidential address to the International Society of Surgery: "Only the humanist sentiment can allow us to balance our legitimate scientific curiosities and the interests of those who entrust themselves to us."

Soon after the outbreak of World War II in 1939, Leriche was placed in charge of the center for vascular surgery at Lyon, where he hoped to apply some of the hard-learned lessons of the First World War regarding wound debridement and vascular injuries. After the French surrender the Vichy government offered him two cabinet posts which he refused, alleging a total administrative incompetence. Then, at the end of October 1940, Vichy decided to create an Order of Physicians and, in view of Leriche's international stature, they chose him to be its president. At first he declined the post, only to be told that the Germans demanded to have within forty-eight hours the name of a single physician responsible for the entire French medical profession. They threatened to conscript some 6,000 French physicians and, since Germany faced a critical doctor shortage, these men would certainly be deported to Germany. After learning of this Leriche accepted the Vichy post, although the job was loathsome to him. He became the head of a non-existent organization with no government subsidy, insufficient funds and minimal secretarial help. He managed to form councils of the Order in every department, establish a code of ethics, formulate a pension plan and help and defend Jewish physicians and displaced persons. During his tenure not a single French physician was deported to Germany. For foreign and Jewish physicians other problems arose, but many were helped to escape to the free zone with falsified papers. For those who chose to stay there was the protection afforded by hospital admission under Leriche's signature and an alias. He preyed on the German fear of tuberculosis by submitting a urine sample plus several drops of added blood to an "official" laboratory with the label, "Weight loss, albuminuria, suspicion of renal tuberculosis." This was usually sufficient protection.

Leriche made every effort to change the competitive, antiquated French system of medical education. He sought to make it more like the American system by limiting the number of students, thus lowering the high attrition rate, replacing the *externat* with compulsory clinical rotations, to be followed by an *internat* based on examination grades



rather than a *concours*. He had been advocating such changes for years but, unfortunately, in 1945, his formal proposals were rejected.

Leriche himself was not immune to the continuous undercurrent of criticism of the Vichy government, and was even openly accused of being a collaborator. Yet he did what he thought was his duty, and would have found it painful to profit by France's misfortune. When Vichy offered him the chair of surgery at Salpétrière he replied that he wished to be named by "regular means." Subsequently he refused two other chairs and a high decoration—Commander of the Legion of Honor—for the same reason. After the war he recommenced his teaching at the Collège de France and was elected to the Academy of Sciences.

Leriche agreed with Proudhon that "science requires a revolution of the mind," yet he always claimed that he was unable to think without a substrate of facts, and insisted throughout his career on the importance of experimentation and research in surgery. From the experimental intuition of Claude Bernard he distinguished a Cartesian intuition which exalted "a healthy and attentive mind" over the variable powers of observation and the often misdirected talent of imagination. In a lecture at the Collège de France shortly after Paul Valéry's last lecture, Leriche expanded and codified many of his thoughts on the role of the mind in science. It was not at all strange for a surgeon to give a lecture entitled, "Paul Valéry and the Scientific Mind," for Valéry was the most precise, the most scientific, the most pure of poets. Having been the disciple of Stephane Mallarmé, Valéry considered and used language as an exercise in formal mathematics; he preferred "the emotions of the mind" to those of the heart: his poetry reveals a destructive lucidity and an almost inhuman distance. Yet such an exultation of the intelligence over all other faculties has always gained him a great following in scientific circles. Leriche wrote that this return to the intelligence must signal for scientists a more modest attitude in regard to the phenomena of life, and in regard to their own capabilities. Yet what is essential is a balance: "Method, without a mind to animate it, constructs only a paltry science, proud of its conclusion, that the next day's experiment annuls and demolishes. Intuition without experimental control engenders only reveries and soap bubbles. . . . Truth is in balance, in measure. Balance in the individual is the privilege of genius."

Leriche was possessed with the rare gift of being able to appreciate the unity of human knowledge, of being able to synthesize ideas and facts. He was submissive to facts and experimental observations, yet sought to arrive at a conclusion free of scholasticism and unencumbered by the burdensome traditions which weigh upon medical science. His mind dealt in ideas, although he claimed it needed the nourishment of facts.

And what a fertile mind it was. In his 1400 odd publications, the breadth of his interests touched nearly all aspects of surgery. Early in his career, he viewed osseous tissue as being composed of two elements—organic and mineral matter, and saw bone pathology as gravitating between two poles—reconstruction and demineralization. He studied bony regeneration, the formation of callus, the osteolytic process, humoral influences on osteogenesis, the method of reduction of fractures, and the roles of circulation, innervation and metabolism.

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His most constant interest was in the study of lesions of the vascular system: he studied ischemia and its mechanism of action, and the physiology of collateral circulation. He provided new operations for arterial occlusions; he described the syndrome of obliteration of the aortic bifurcation which now bears his name, and foresaw the kind of reconstructive surgery that has become almost commonplace in our time. He studied humoral influences on the vascular system as well as the indications for adrenalectomy. Most importantly, he studied the effects of the autonomic nervous system on bloodflow.

In 1914, as a neurosurgeon, before neurosurgery was a full-grown specialty, Leriche performed his first retrogasserian neurotomies for trigeminal neuralgia (the second in France). During World War I he published his results of a large series of cranial wounds. Subsequently he studied Jacksonian epilepsy, Parkinson's disease and was the first to describe the syndrome of the superior petrous sinus. Later he studied the syndrome of CSF hypotension, and published his results of ablation of medullary tumors. He was the first to propose midline myelotomy, splitting the cord in order to produce bilateral analgesia in the lower extremities.

But always central to Leriche's contribution was his personality and temperament. Here was the most humble of men—a short man with a prominent forehead whose warmth and radiance set him apart at a glance. He was exquisitely sensitive to the pain of his patients, yet his presence and conversation seemed to communicate a boundless goodness and understanding that never failed to be comforting. Shortly after Leriche's death, Paul Savy wrote, "this surgeon of pain was the physician of anguish as well." Was he not a surgeon who could boast of never having been refused operative permission?

His interests in art and literature were catholic, and the grace and warmth of his hospitality at the Maison Voltaire in Strasbourg or at his home in Rue d'Alboni in Paris captivated an endless succession of friends and visitors. At the conference table his sincerity and lucidity often rescued a wandering or heated discussion; in a succinct sentence or two he could summarize an entire afternoon's proceedings. He never spoke from notes, yet his speech was precise and original—it was said that a listener needed no knowledge of French to understand what he was saying. Georges Duhamel of the French Academy associated him with Charles Nicolle in his literary power.

He was a man who loved to travel, and he could communicate with men of all tongues and all races. The modern system of international congresses gave foreign surgeons frequent opportunities for seeing and hearing Leriche. Grad-

ually he came to feel a sense of duty in traveling abroad, in representing French surgery in other nations, as well as keeping abreast of developments in foreign surgical centers. Wherever he traveled and whatever the mechanism of his contact with his colleagues, he was at all times the central figure, drawing men around him, yet he was never domineering or pontifical.

A list of all the honors awarded to René Leriche would be a summary of all the tributes that a grateful medical community can bestow on one of its most distinguished members. He was an honorary fellow of the Royal College of Surgeons of England, of the Royal College of Surgeons of Edinburgh, of the Royal Society of Medicine, and of the American College of Surgeons, and received similar honors from medical societies and scientific academies in Portugal, Finland, Sweden, Yugoslavia, Italy, Czechoslovakia, Argentina, Brazil, Austria, Venezuela, Norway, Denmark, Germany, Mexico, Belgium, Rumania, Cuba, Spain, and the U.S.S.R. He was surgeon-in-chief *pro tempore* at Lakeside Hospital in Cleveland and at Peter Bent Brigham Hospital. He was also a doctor *honoris causa* from Harvard, from Glasgow, and from thirteen other universities in Europe and South America. He was an officer of the Legion of Honor, Commander Ordre Royal Gustave, Commander Ordre Santiago de Portugal, Officer of the Ordre de Léopold de Belgique, and Officier de Saint-Sava.

Yet one of the most moving tributes among the many that were written after his death was by Sir James Learmouth, who poignantly recalled Leriche's visit to the University of Edinburgh several years previously:

> "I choose one illustration of this power for good which he exercised. It was a simple occasion compared to the splendid functions at which he was so often the central figure—a simple occasion, but a very moving one. This was his impact on my students when he honoured the University of Edinburgh by acting as Visiting Professor of Surgery. From the first moments of his opening lecture—delivered in French—these Scotch students took him into their hearts. They listened enthralled to the course; and at the end of his last lecture as he left the amphitheater, they applauded without restraint, and with him there marched a young Scot, playing a triumphal melody on the bagpipes. The Scots are not an emotional nation, and even when young they are severe critics, quick to see through any shallowness or pretense. In my lifetime I have not seen or heard of the like.

Leriche's death on December 28, 1955 caused countless numbers of friends, colleagues, former students and patients to remember the debt they owed him. The obituaries that appeared in surgical publications of all nations, and the hundreds of letters written to Mme. Leriche revealed a respect and devotion bordering on idolatry. He left his mark upon a generation not only because he was brighter and more farsighted than his contemporaries, but because his generosity and sympathy knew no bounds—like the simple servant who cares for a dying man in Tolstoy's *The Death of Ivan Ilyitch*, he was able to cope with suffering and despair when science alone was not enough.

A street sign honors Leriche in Cassis, France.

ALONG THE PERIMETER

Cook Incumbent Named

On July 1, 1967, Dr. Herbert L. Abrams, a recognized leader in diagnostic radiology, will become the first Philip H. Cook Professor of Radiology and chairman of the department at HMS. Simultaneously, he will become radiologist-in-chief at the Peter Bent Brigham Hospital.

His appointments are announced by Dr. Ebert and Mr. Alan Steinert, president of the Hospital's Board of Trustees. As a diagnostic radiologist the appointment of Dr. Abrams, said Dr. Ebert, "signals the first step in a formal separation of the disciplines of Diagnostic Radiology and Radiotherapy at Harvard Medical School."

Dr. Abrams has been a member of the faculty at Stanford University School of Medicine since 1948. Currently, he is professor of radiology and director of the division of diagnostic radiology.

Using radiologic methods for physiologic study, Dr. Abrams is particularly interested in the cardiovascular system. In 1956, he was co-author of *Angiocardiographic Interpretation in Congenital Heart Disease;* in 1961, the editor of Volumes I and II of *Angiography;* and in 1965, co-author of *Congenital Heart Disease.*

From 1962–66 Dr. Abrams was a member of the Radiation Study Section of the NIH and he is currently the national consultant in radiology to the NIH Cooperative Study on Renovascular Hypertension.

The Philip H. Cook Professorship stems from a residuary bequest made by Philip H. Cook '03 upon his death in 1954. Dr. Cook had been president of the New England Roentgen Ray Society and had served as roentgenologist at the Worcester City and Memorial Hospitals, and at the Worcester Hospital for the Insane.

Dr. Cook's bequest was used initially by the President and Fellows of Harvard College to establish the Philip H. Cook Fund for Radiology. With the appointment of Dr. Abrams, Dr. Cook's expectations have been fulfilled; "It is my hope that the President and Fellows may consider it advisable to use said income to establish a Chair to be called the Philip H. Cook Professorship of Radiology."

Two Appointed Associate Professors of Neurobiology

Two authorities in the field of neuromuscular transmission, Edwin J. Furshpan and David D. Potter, have been promoted to associate professorships in Harvard's newly-created Department of Neurobiology.

In the early 1950's, it was widely held that most, if not all, synaptic transmission was chemically induced. Drs. Furshpan and Potter challenged the theory. In 1959, they described the first electrical transmission and later demonstrated that, in addition to an electrical mechanism of transmission, the same nerve cells can possess synapses in which transmission is carried out by a chemical process.

Their discovery of two types of synapse changed the entire experimental approach to synaptic transmission. But even more important, it re-opened the possibility that such synapses might exist in vertebrates. And in 1964, working independently, Dr. Furshpan discovered the first electrically transmitting excitatory synapse in a vertebrate. This transmission occurs between the large neurons of the eighth nerve and the lateral dendrite of the Mauthner cell, located in the brain stem of the goldfish.

In 1965, Drs. Furshpan and Potter turned their attention to the question of how growing or regenerating cells find their target organs. By studying the developing squid embryo, they found that the interiors of all the cells are interconnected, not only during the early stages of development, but even when various organs have begun to differentiate. These cell connections disappear only in the last stages of differentiation. This discovery suggests the possibility that during development, cells can control each other's differentiation through the channels of communication between the interior of cells. Drs. Furshpan and Potter are now preparing to test this hypothesis.

Dr. Furshpan received the Ph.D. degree in animal physiology in 1955 from California Institute of Technology; Dr. Potter received the Ph.D. degree in biology in 1956 from Harvard. Both have been Faculty members since 1959.

Dr. Abrams

CNS Authority Becomes Professor of Physiology

Dr. Torsten N. Wiesel has been promoted to professor of physiology at HMS. Since 1964, he has been assistant professor of neurophysiology in the department of psychiatry.

Dr. Wiesel's research is conducted in close collaboration with Dr. David H. Hubel, professor of neurophysiology at HMS. Their basic research on visual functions delineated the manner in which the central nervous system processes information. They demonstrated that the enormous complexity of neuronal interconnections in the visual sensory area of the cerebral cortex, necessary to information processing, are present at birth. They are not the result of learning processes.

More recently, they have been investigating the neural mechanisms concerned with color vision in the monkey. They have shown that some cells carry information on both color and form of a stimulus, while other cells are concerned only with form, or predominantly with color.

The work of Drs. Wiesel and Hubel opened up hitherto unexplored areas of research directly concerned with the functioning of the visual system. Additionally, their findings are of fundamental importance to the study of the nervous system as a whole.

Dr. Wiesel is a member of the NIH Study Section in Vision, the American Physiological Society, and the American Association for the Advancement of Science.

Rescue Italian Art

Monuments and works of art, valued at over $130,000,000, were either damaged or destroyed in the recent, worst flood disaster in Italian history. The National Committee for the Rescue of Italian Art, of which Mrs. John F. Kennedy is the Honorary Chairman, has designated the Fogg Art Museum of Harvard University as the Boston-area headquarters of its drive for funds. Donations may be sent to: The Committee for the Rescue of Italian Art, c/o Fogg Museum, Cambridge, Mass. 02138.

Dr. Wiesel

Geneticist Promoted

Dr. Park S. Gerald has been promoted to the tenure post of associate professor of pediatrics at The Children's Hospital where he is also senior associate in medicine and associate hematologist.

Early in his career, he studied hemoglobinopathies with Louis K. Diamond '27, professor of pediatrics at The Children's Hospital. During this time, Dr. Gerald contributed significantly to an understanding of the relationship between the molecular structure and functional activity of a variety of abnormal hemoglobins. His years with Dr. Diamond so excited his interest in genetics that he took a year to study with Professor Penrose at the Galton Laboratory at University College in London.

Dr. Gerald returned to the Hospital in 1959 and established the Clinical Genetics Unit. He has made steady progress in locating genes in specific chromosomes and his research has yielded valuable information about the role of inheritance and specific genetic disturbances in the production of congenital defects.

In recognition of his research achievements, Dr. Gerald received the E. Mead Johnson Award in 1962.

Honorary Curatorship for Dr. Burwell

C. Sidney Burwell '19 has been appointed Honorary Curator of the Harvard Medical School Archives in the Countway Library. In announcing his appointment, Dr. Ebert paid particular tribute to Dr. Burwell's guidance and advice in "bringing to the Archives the personal and professional papers of distinguished members of the Harvard Medical community."

Dr. Burwell recently completed writing a history of HMS which is soon to be published by the Harvard University Press.

In addition to his new appointment, Dr. Burwell is former Dean of Harvard Medical School, Samuel A. Levine Professor of Medicine, Emeritus, and special consultant to the Dean of the Faculty of Medicine.

Lasker Award to Dr. Farber

"Distinguished pathologist, gifted clinical investigator, dedicated physician, and respected medical statesman" read the citation to Sidney Farber '27, when he received the 1966 Albert Lasker Clinical Research Award. Dr. Farber (*above*) is professor of pathology at Children's Hospital, Boston; pathologist-in-chief and chairman of the staff at the Hospital; and director of research at the Children's Cancer Research Foundation.

The Award honors Dr. Farber's significant contributions to clinical investigations, and the application of basic research findings to eliminate the major medical causes of death and disability which result in the prolongation of the prime of life. It consists of $10,000, an illuminated citation, and a gold statuette of the Winged Victory of Samothrace.

Dr. Farber received the Award for "his success in converting the early hopelessness and defeatism of physicians and medical scientists toward cancer, into vigorous and productive research." In 1947, he discovered that the drug, aminopterin and the related chemical methotrexate, caused temporary, but complete, remission of symptoms in acute leukemia. Aminopterin, a folic acid antagonist and anti-metabolite has extended the lives of leukemia patients for periods up to twelve years. It was this discovery of Dr. Farber's that demonstrated the feasibility of cancer control through the use of drugs, and thus initiated the era of cancer chemotherapy.

New View to Removal

A bi-plane fluoroscope, normally used for cardiac catheterizations, was used at The Children's Hospital Medical Center, Boston, to remove a piece of rubber tube, about one-third of an inch in size, lodged in one of the small bronchial divisions of the lower right lobe of a sixteen year-old girl's lung.

Ordinarily, if objects located in this region are not coughed up, they must be removed either through a bronchoscope, or by surgery, which may involve removal of the part of the lung containing the object. The bronchoscope had proven unsuccessful in this case because the tube was too deep in the lung to be seen, and the single plane fluoroscope, used to observe and guide the bronchoscope, permitted only one view of the lung at a time. One of the doctors felt the new bi-plane fluoroscope, with its dual view capabilities, might be used successfully.

A team of doctors, including Donald C. Fyler '48, director of the new Cardiovascular Diagnostic Laboratory, and Dr. Carlyle G. Flake, otolaryngologist-in-chief, took part in the unusual procedure. Specially made forceps were passed through a bronchoscope. Using the fluoroscope's two television monitors to observe and guide the forceps into the lung, the doctors were able to reach, grasp, and eventually remove the piece of rubber.

The patient was discharged the following morning—in time to attend a football game.

Commonwealth Grant for Community Psychiatry

The Commonwealth Fund has awarded HMS a $42,510 grant to coordinate the first two years of a four-year Inter-University Forum for Educators in Community Psychiatry. Dr. Gerald Caplan, clinical professor of psychiatry and director of the laboratory for community psychiatry, will coordinate the Forum.

Six medical schools will participate in the Forum: Baylor University College of Medicine, University of California School of Medicine, University of Chicago School of Medicine, Duke University Medical Center, University of Pittsburgh School of Medicine, and the University of Vermont Medical School.

Beginning next September, if additional, necessary funds become available, the Forum will bring together those teachers of psychiatry who are responsible for the three-year psychiatry residency training programs in their respective universities, psychiatric hospitals, and clinics.

The Community Mental Health Centers Act of 1963 sharply pointed up the need to improve residency training with regard to community psychiatry. The Forum, which is part of the continuing effort to upgrade these programs, will focus on such aspects as community organization and planning, community development, methods of preventive psychiatry, and the social science aspects of mental health practice and research.

According to Dr. Caplan, the goal "is for these teachers to stimulate the development of community aspects of the psychiatric residency training programs in their home institutions so that the psychiatrists they train may improve their basic contributions to the rapidly evolving community mental health field." To this end, the meetings will be organized as joint study groups, involving informal conferences with specialists in the research and clinical areas of community psychiatry. This teaching pattern is a direct outgrowth of a three-year pilot program—the Visiting Faculty Seminar in Community Psychiatry—which was organized at Harvard. Sixteen professors from medical schools throughout the country have met for two weeks of study, three times each year.

Dr. Chapman Delivers Ellis Lecture at BCH

The second Laurence B. Ellis Lecture of the Harvard Medical Unit at the Boston City Hospital was given by Carleton B. Chapman '41, dean of Dartmouth Medical School. The title of Dr. Chapman's lecture was, "Adaptation of the Human Organism to Physical Stress."

He described studies in the physiology of human exercise, in which young men underwent a six-week program of physical training, the culmination of which was a nine-mile run twice daily. But to determine the effects of deconditioning, one period of twenty-five days of bedrest was also included in the program.

Dr. Chapman pointed out the value of using the maximal oxygen uptake to indicate levels of exercise, and spoke of the body's ability to increase the maximal oxygen uptake by changes in both stroke volume and heart rate. He said he found no respiratory component limiting the uptake in his subjects, and no arterial oxygen unsaturation with extreme exercise, although remarkably high arterio-venous oxygen differences can be achieved.

The exact nature of deconditioning remains unknown, but Dr. Chapman gave his audience pause for concern by reporting that as few as six weeks of inactivity can negate the effect of many years of physical training.

In discussing possible future directions of exercise physiology research, he suggested that simulation of the deconditioned state by administration of beta receptor adrenergic blocking agents might prove fruitful. The regional distribution of the remarkable increases in cardiac output above 23 L/min., for example, should be determined. Finally, a clear understanding of what goes on within the exercising muscle cell is needed, with particular attention paid to the role of myoglobin in maximal exercise situations.

The Ellis Lectureship was established by students, patients and friends of Laurence B. Ellis '26, who for many years has been physician-in-charge of the electrocardiographic laboratory at Boston City Hospital.

INSIDE HMS: Second Year Show

The annual Smut Spectacular hit the boards in traditional form this year as a small (but presumably select) cast belted out the bawdry in the name of satire. From the title ("Warren's Piece, or, how to cream the system without actually beating it") to the *dramatis personae* (censored), the spirit of The Gross was rampant over all.

The opening "ivory towers" scene set both mood and plot in motion as the audience saw the Praesidium of Hardleigh Progressive Med School meeting in the appropriate "conference room" in the "bowels of Building A" to plot how the curriculum should maintain the "communications gap."

After the Dean told the entering class ("from schools *all over* New England") about their composition ("Equal representation for the three major faiths: Orthodox, Conservative and Reform"), the dramatic lens focussed on Peter Rast, boy student from Sioux Falls, from whose idealistic eyes still gleamed the desire for general practice.

Through his suffering sight, we view Anatomy ("Awriight! The exam is over, drop your papers, put your hands behind your heads, nobody move!"); Physiology ("Perhaps-uh-perhaps I'd better give you-uh-give you an-uh, an—an *analogy*, yes, that's it, an—uh—an analogy"); Histology ("This is an artefact—it's tongue") and Biochem ("Better watch it—some of the students almost understood that last lecture").

Peter's restless dissatisfaction with doggie, turtle and toad brings him at last to the office of that traditional hook-nosed villain, the ritual medical Malvolio, the man we love to hate—the man named (in this instance) Dean Benito Warren Warren. His suggested remedy is (to the astonishment of all) a research project, involving a highly charged research assistant with a strong potential on any meter—female, as they say. After demonstrating her qualifications (to the snarl of cymbal and rumble of drum), she is accepted and the project is on (Song: You Have to Pay the Price).

Now subplots uncoil like infant snakes: Peter's symbolic lust for Connie; Benito's realistic lust for E. D. Once-a-day; Miss Once-a-day's demoniac lust for revenge. A brief visit to clinic ("let's have a freak show") reveals the wonders of transplantation and some rather unusual prosthetic devices. Meanwhile the students are lunching, in more ways than one. Out on the quad, a gospel meeting celebrates the theme, "Blessed are the pores"—the endothelial pores, that is. The fateful finale conveys the moral: everybody plays ball with Benito.

The cast performed with an energy and enthusiasm that sustained the long show; music and lyrics were crisp and clear; and the direction, competent. Above all, the cast seemed to be enjoying themselves as much as the audience—and that is exactly as it should be. "Good show!" to the Class of '69 for a finely turned piece.

T. "TK" G.